



## SEQUENCE LISTING

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KRAETZSCHMAR, JOERN  
KREFT, BERTHOLT  
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REGIDOR, PEDRO  
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<120> METHOD FOR IN VITRO DIAGNOSIS OF ENDOMETRIOSIS

<130> SCH-1789

<140> 09/961,403

<141> 2001-09-25

<160> 15

<170> PatentIn Ver. 2.1

<210> 1

<211> 2386

<212> PRT

<213> Homo sapiens

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Lys Pro Gly Cys Tyr Asp Asn Gly Lys His Tyr Gln Ile Asn Gln Gln  
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Trp Glu Arg Thr Tyr Leu Gly Asn Ala Leu Val Cys Thr Cys Tyr Gly  
65 70 75 80

Gly Ser Arg Gly Phe Asn Cys Glu Ser Lys Pro Glu Ala Glu Glu Thr  
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Cys Phe Asp Lys Tyr Thr Gly Asn Thr Tyr Arg Val Gly Asp Thr Tyr  
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Glu Arg Pro Lys Asp Ser Met Ile Trp Asp Cys Thr Cys Ile Gly Ala  
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Gly Arg Gly Arg Ile Ser Cys Thr Ile Ala Asn Arg Cys His Glu Gly  
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Gly Gln Ser Tyr Lys Ile Gly Asp Thr Trp Arg Arg Pro His Glu Thr  
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Gly Gly Tyr Met Leu Glu Cys Val Cys Leu Gly Asn Gly Lys Gly Glu  
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Trp Thr Cys Lys Pro Ile Ala Glu Lys Cys Phe Asp His Ala Ala Gly  
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Thr Ser Tyr Val Val Gly Glu Thr Trp Glu Lys Pro Tyr Gln Gly Trp  
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Met Met Val Asp Cys Thr Cys Leu Gly Glu Gly Ser Gly Arg Ile Thr  
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Cys Thr Ser Arg Asn Arg Cys Asn Asp Gln Asp Thr Arg Thr Ser Tyr  
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Arg Ile Gly Asp Thr Trp Ser Lys Lys Asp Asn Arg Gly Asn Leu Leu  
245 250 255

Gln Cys Ile Cys Thr Gly Asn Gly Arg Gly Glu Trp Lys Cys Glu Arg  
260 265 270

His Thr Ser Val Gln Thr Thr Ser Ser Gly Ser Gly Pro Phe Thr Asp  
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Val Arg Ala Ala Val Tyr Gln Pro Gln Pro His Pro Gln Pro Pro Pro  
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Tyr Gly His Cys Val Thr Asp Ser Gly Val Val Tyr Ser Val Gly Met  
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Gln Trp Leu Lys Thr Gln Gly Asn Lys Gln Met Leu Cys Thr Cys Leu  
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Gly Asn Gly Val Ser Cys Gln Glu Thr Ala Val Thr Gln Thr Tyr Gly  
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Gly Asn Ser Asn Gly Glu Pro Cys Val Leu Pro Phe Thr Tyr Asn Gly  
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Arg Thr Phe Tyr Ser Cys Thr Thr Glu Gly Arg Gln Asp Gly His Leu  
370 375 380

Trp Cys Ser Thr Thr Ser Asn Tyr Glu Gln Asp Gln Lys Tyr Ser Phe  
385 390 395 400

Cys Thr Asp His Thr Val Leu Val Gln Thr Gln Gly Gly Asn Ser Asn  
405 410 415

Gly Ala Leu Cys His Phe Pro Phe Leu Tyr Asn Asn His Asn Tyr Thr  
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Asp Cys Thr Ser Glu Gly Arg Arg Asp Asn Met Lys Trp Cys Gly Thr  
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Thr Gln Asn Tyr Asp Ala Asp Gln Lys Phe Gly Phe Cys Pro Met Ala  
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Ala His Glu Glu Ile Cys Thr Thr Asn Glu Gly Val Met Tyr Arg Ile  
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Gly Asp Gln Trp Asp Lys Gln His Asp Met Gly His Met Met Arg Cys  
485 490 495

Thr Cys Val Gly Asn Gly Arg Gly Glu Trp Thr Cys Ile Ala Tyr Ser  
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Gln Leu Arg Asp Gln Cys Ile Val Asp Asp Ile Thr Tyr Asn Val Asn  
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Asp Thr Phe His Lys Arg His Glu Glu Gly His Met Leu Asn Cys Thr  
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Cys Phe Gly Gln Gly Arg Gly Arg Trp Lys Cys Asp Pro Val Asp Gln  
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Cys Gln Asp Ser Glu Thr Gly Thr Phe Tyr Gln Ile Gly Asp Ser Trp  
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Glu Lys Tyr Val His Gly Val Arg Tyr Gln Cys Tyr Cys Tyr Gly Arg  
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Gly Ile Gly Glu Trp His Cys Gln Pro Leu Gln Thr Tyr Pro Ser Ser  
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Ser Gly Pro Val Glu Val Phe Ile Thr Glu Thr Pro Ser Gln Pro Asn  
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Ser His Pro Ile Gln Trp Asn Ala Pro Gln Pro Ser His Ile Ser Lys  
625 630 635 640

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Ala Thr Ile Pro Gly His Leu Asn Ser Tyr Thr Ile Lys Gly Leu Lys  
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Pro Gly Val Val Tyr Glu Gly Gln Leu Ile Ser Ile Gln Gln Tyr Gly  
675 680 685

His Gln Glu Val Thr Arg Phe Asp Phe Thr Thr Ser Thr Ser Thr  
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Leu Val Ala Thr Ser Glu Ser Val Thr Glu Ile Thr Ala Ser Ser Phe  
725 730 735

Val Val Ser Trp Val Ser Ala Ser Asp Thr Val Ser Gly Phe Arg Val  
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Glu Tyr Glu Leu Ser Glu Glu Gly Asp Glu Pro Gln Tyr Leu Asp Leu  
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Pro Ser Thr Ala Thr Ser Val Asn Ile Pro Asp Leu Leu Pro Gly Arg  
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785 790 795 800

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Pro Thr Val Asp Gln Val Asp Asp Thr Ser Ile Val Val Arg Trp Ser  
820 825 830

Arg Pro Gln Ala Pro Ile Thr Gly Tyr Arg Ile Val Tyr Ser Pro Ser  
835 840 845

Val Glu Gly Ser Ser Thr Glu Leu Asn Leu Pro Glu Thr Ala Asn Ser  
850 855 860

Val Thr Leu Ser Asp Leu Gln Pro Gly Val Gln Tyr Asn Ile Thr Ile  
865 870 875 880

Tyr Ala Val Glu Glu Asn Gln Glu Ser Thr Pro Val Val Ile Gln Gln  
885 890 895

Glu Thr Thr Gly Thr Pro Arg Ser Asp Thr Val Pro Ser Pro Arg Asp  
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Leu Gln Phe Val Glu Val Thr Asp Val Lys Val Thr Ile Met Trp Thr  
915 920 925

Pro Pro Glu Ser Ala Val Thr Gly Tyr Arg Val Asp Val Ile Pro Val  
930 935 940

Asn Leu Pro Gly Glu His Gly Gln Arg Leu Pro Ile Ser Arg Asn Thr  
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Phe Ala Glu Val Thr Gly Leu Ser Pro Gly Val Thr Tyr Tyr Phe Lys  
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Val Phe Ala Val Ser His Gly Arg Glu Ser Lys Pro Leu Thr Ala Gln  
980 985 990

Gln Thr Thr Lys Leu Asp Ala Pro Thr Asn Leu Gln Phe Val Asn Glu  
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Thr Gly Tyr Arg Leu Thr Val Gly Leu Thr Arg Arg Gly Gln Pro Arg  
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Gln Tyr Asn Val Gly Pro Ser Val Ser Lys Tyr Pro Leu Arg Asn Leu  
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Gln Pro Ala Ser Glu Tyr Thr Val Ser Leu Val Ala Ile Lys Gly Asn  
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Gln Glu Ser Pro Lys Ala Thr Gly Val Phe Thr Thr Leu Gln Pro Gly  
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Ser Ser Ile Pro Pro Tyr Asn Thr Glu Val Thr Glu Thr Thr Ile Val  
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Ile Thr Trp Thr Pro Ala Pro Arg Ile Gly Phe Lys Leu Gly Val Arg  
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Pro Ser Gln Gly Gly Glu Ala Pro Arg Glu Val Thr Ser Asp Ser Gly  
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Ser Ile Val Val Ser Gly Leu Thr Pro Gly Val Glu Tyr Val Tyr Thr  
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Ile Gln Val Leu Arg Asp Gly Gln Glu Arg Asp Ala Pro Ile Val Asn  
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Gln Gly Asn Ser Leu Glu Glu Val Val His Ala Asp Gln Ser Ser Cys  
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Thr Phe Asp Asn Leu Ser Pro Gly Leu Glu Tyr Asn Val Ser Val Tyr  
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Pro Ala Val Pro Pro Pro Thr Asp Leu Arg Phe Thr Asn Ile Gly Pro  
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Asp Thr Met Arg Val Thr Trp Ala Pro Pro Pro Ser Ile Asp Leu Thr  
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Asn Phe Leu Val Arg Tyr Ser Pro Val Lys Asn Glu Glu Asp Val Ala  
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Glu Leu Ser Ile Ser Pro Ser Asp Asn Ala Val Val Leu Thr Asn Leu  
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Leu Pro Gly Thr Glu Tyr Val Val Ser Val Ser Ser Val Tyr Glu Gln  
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His Glu Ser Thr Pro Leu Arg Gly Arg Gln Lys Thr Gly Leu Asp Ser  
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Pro Thr Gly Ile Asp Phe Ser Asp Ile Thr Ala Asn Ser Phe Thr Val  
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His Trp Ile Ala Pro Arg Ala Thr Ile Thr Gly Tyr Arg Ile Arg His  
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His Pro Glu His Phe Ser Gly Arg Pro Arg Glu Asp Arg Val Pro His  
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Ser Arg Asn Ser Ile Thr Leu Thr Asn Leu Thr Pro Gly Thr Glu Tyr  
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Thr Tyr Ser Ser Pro Glu Asp Gly Ile His Glu Leu Phe Pro Ala Pro  
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Asp Gly Glu Glu Asp Thr Ala Glu Leu Gln Gly Leu Arg Pro Gly Ser  
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 Lys Phe Thr Gln Val Thr Pro Thr Ser Leu Ser Ala Gln Trp Thr Pro  
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 Pro Asn Val Gln Leu Thr Gly Tyr Arg Val Arg Val Thr Pro Lys Glu  
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 Lys Thr Gly Pro Met Lys Glu Ile Asn Leu Ala Pro Asp Ser Ser Ser  
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 Tyr Glu Lys Pro Gly Ser Pro Pro Arg Glu Val Val Pro Arg Pro Arg  
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 1955 1960 1965  
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1985 1990 1995 2000

Pro His Pro Asn Leu His Gly Pro Glu Ile Leu Asp Val Pro Ser Thr  
2005 2010 2015

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Gln Glu Ala Leu Ser Gln Thr Thr Ile Ser Trp Ala Pro Phe Gln Asp  
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Thr Ser Glu Tyr Ile Ile Ser Cys His Pro Val Gly Thr Asp Glu Glu  
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Pro Leu Gln Phe Arg Val Pro Gly Thr Ser Thr Ser Ala Thr Leu Thr  
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Gly Leu Thr Arg Gly Ala Thr Tyr Asn Ile Ile Val Glu Ala Leu Lys  
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Asp Gln Gln Arg His Lys Val Arg Glu Glu Val Val Thr Val Gly Asn  
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2245 2250 2255

Asn Tyr Lys Ile Gly Glu Lys Trp Asp Arg Gln Gly Glu Asn Gly Gln  
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Asp Pro His Glu Ala Thr Cys Tyr Asp Asp Gly Lys Thr Tyr His Val  
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Cys Phe Gly Gly Gln Arg Gly Trp Arg Cys Asp Asn Cys Arg Arg Pro  
 2325 2330 2335

Gly Gly Glu Pro Ser Pro Glu Gly Thr Thr Gly Gln Ser Tyr Asn Gln  
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 <213> Homo sapiens

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Gly Gly Gly Gly Ala Arg Ala Glu Val Leu Phe Arg Cys Pro Pro Cys  
 35 40 45

Thr Pro Glu Arg Leu Ala Ala Cys Gly Pro Pro Pro Val Ala Pro Pro  
 50 55 60

Ala Ala Val Ala Ala Val Ala Gly Gly Ala Arg Met Pro Cys Ala Glu  
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Leu Val Arg Glu Pro Gly Cys Gly Cys Cys Ser Val Cys Ala Arg Leu  
 85 90 95

Glu Gly Glu Ala Cys Gly Val Tyr Thr Pro Arg Cys Gly Gln Gly Leu  
 100 105 110

Arg Cys Tyr Pro His Pro Gly Ser Glu Leu Pro Leu Gln Ala Leu Val  
 115 120 125

Met Gly Glu Gly Thr Cys Glu Lys Arg Arg Asp Ala Glu Tyr Gly Ala  
 130 135 140

Ser Pro Glu Gln Val Ala Asp Asn Gly Asp Asp His Ser Glu Gly Gly  
 145 150 155 160

Leu Val Glu Asn His Val Asp Ser Thr Met Asn Met Leu Gly Gly Gly  
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 Gly Ser Ala Gly Arg Lys Pro Leu Lys Ser Gly Met Lys Glu Leu Ala  
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 Val Phe Arg Glu Lys Val Thr Glu Gln His Arg Gln Met Gly Lys Gly  
 195 200 205  
 Gly Lys His His Leu Gly Leu Glu Glu Pro Lys Lys Leu Arg Pro Pro  
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 Pro Ala Arg Thr Pro Cys Gln Gln Glu Leu Asp Gln Val Leu Glu Arg  
 225 230 235 240  
 Ile Ser Thr Met Arg Leu Pro Asp Glu Arg Gly Pro Leu Glu His Leu  
 245 250 255  
 Tyr Ser Leu His Ile Pro Asn Cys Asp Lys His Gly Leu Tyr Asn Leu  
 260 265 270  
 Lys Gln Cys Lys Met Ser Leu Asn Gly Gln Arg Gly Glu Cys Trp Cys  
 275 280 285  
 Val Asn Pro Asn Thr Gly Lys Leu Ile Gln Gly Ala Pro Thr Ile Arg  
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 Gly Val His Thr Gln Arg Met Gln  
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 35 40 45  
 Ala Leu Leu Arg Cys Glu Val Glu Ala Pro Gly Pro Val His Val Tyr  
 50 55 60  
 Trp Leu Leu Asp Gly Ala Pro Val Gln Asp Thr Glu Arg Arg Phe Ala  
 65 70 75 80  
 Gln Gly Ser Ser Leu Ser Phe Ala Ala Val Asp Pro Leu Gln Asp Ser  
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Gly Thr Phe Gln Cys Val Ala Arg Asp Asp Val Thr Gly Glu Glu Ala  
 100 105 110

Arg Ser Ala Asn Ala Ser Phe Asn Ile Lys Trp Ile Glu Ala Gly Pro  
 115 120 125

Val Val Leu Lys His Pro Ala Ser Glu Ala Glu Ile Gln Pro Gln Thr  
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Gln Val Lys Leu Arg Cys His Ile Asp Gly His Pro Arg Pro Thr Tyr  
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Gln Trp Phe Arg Asp Gly Thr Pro Leu Ser Asp Gly Gln Ser Asn His  
 165 170 175

Thr Val Ser Ser Lys Glu Arg Asn Leu Thr Leu Arg Pro Ala Gly Pro  
 180 185 190

Glu His Ser Gly Leu Tyr Ser Cys Cys Ala His Ser Ala Phe Ser Gln  
 195 200 205

Ala Cys Ser Ser Gln Asn Phe Thr Leu Ser Ile Ala Asp Glu Ser Phe  
 210 215 220

Ala Arg Val Val Leu Ala Pro Gln Asp Val Val Val Ala Arg Tyr Glu  
 225 230 235 240

Glu Ala Met Phe His Cys Gln Phe Ser Ala Gln Pro Pro Pro Ser Leu  
 245 250 255

Gln Trp Leu Phe Glu Asp Glu Thr Pro Ile Thr Asn Arg Ser Arg Pro  
 260 265 270

Pro His Leu Arg Arg Ala Thr Val Phe Ala Asn Gly Ser Leu Leu Leu  
 275 280 285

Thr Gln Val Arg Pro Arg Asn Ala Gly Ile Tyr Arg Cys Ile Gly Gln  
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Gly Gln Arg Gly Pro Pro Ile Ile Leu Glu Ala Thr Leu His Leu Ala  
 305 310 315 320

Glu Ile Glu Asp Met Pro Leu Phe Glu Pro Arg Val Phe Thr Ala Gly  
 325 330 335

Ser Glu Glu Arg Val Thr Cys Leu Pro Pro Lys Gly Leu Pro Glu Pro  
 340 345 350

Ser Val Trp Trp Glu His Ala Gly Val Arg Leu Pro Thr His Gly Arg  
 355 360 365

Val Tyr Gln Lys Gly His Glu Leu Val Leu Ala Asn Ile Ala Glu Ser  
 370 375 380

Asp Ala Gly Val Tyr Thr Cys His Ala Ala Asn Leu Ala Gly Gln Arg  
 385 390 395 400

Arg Gln Asp Val Asn Ile Thr Val Ala Thr Val Pro Ser Trp Leu Lys  
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Lys Pro Gln Asp Ser Gln Leu Glu Glu Gly Lys Pro Gly Tyr Leu Asp  
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Cys Leu Thr Gln Ala Thr Pro Lys Pro Thr Val Val Trp Tyr Arg Asn  
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Gln Met Leu Ile Ser Glu Asp Ser Arg Phe Glu Val Phe Lys Asn Gly  
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Cys Met Ser Ser Thr Pro Ala Gly Ser Ile Glu Ala Gln Ala Val Leu  
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Gln Val Leu Glu Lys Leu Lys Phe Thr Pro Pro Pro Gln Pro Gln Gln  
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Cys Met Gly Phe Asp Lys Glu Ala Thr Val Pro Cys Ser Ala Thr Gly  
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Arg Glu Lys Pro Thr Ile Lys Trp Glu Arg Ala Asp Gly Ser Ser Leu  
 530 535 540

Pro Glu Trp Val Thr Asp Asn Ala Gly Thr Leu His Phe Ala Arg Val  
 545 550 555 560

Thr Arg Asp Asp Ala Gly Asn Tyr Thr Cys Ile Ala Ser Asn Gly Pro  
 565 570 575

Gln Gly Gln Ile Arg Ala His Val Gln Leu Thr Val Ala Val Phe Ile  
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Thr Phe Lys Val Glu Pro Glu Arg Thr Thr Val Tyr Gln Gly His Thr  
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Ala Leu Leu Gln Cys Glu Ala Gln Gly Asp Pro Lys Pro Leu Ile Gln  
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Trp Lys Gly Lys Asp Arg Ile Leu Asp Pro Thr Lys Leu Gly Pro Arg  
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Met His Ile Phe Gln Asn Gly Ser Leu Val Ile His Asp Val Ala Pro  
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Glu Asp Ser Gly Arg Tyr Thr Cys Ile Ala Gly Asn Ser Cys Asn Ile  
 660 665 670

Lys His Thr Glu Ala Pro Leu Tyr Val Val Asp Lys Pro Val Pro Glu  
 675 680 685

Glu Ser Glu Gly Pro Gly Ser Pro Pro Pro Tyr Lys Met Ile Gln Thr  
 690 695 700

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 Lys Gln Pro Glu Gly Glu Pro Glu Met Glu Cys Leu Asn Gly Gly  
 740 745 750  
 Pro Leu Gln Asn Gly Gln Pro Ser Ala Glu Ile Gln Glu Glu Val Ala  
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 770 775 780  
 Thr Ser Asp Lys Met His Phe Pro Arg Ser Ser Leu Gln Pro Ile Thr  
 785 790 795 800  
 Thr Leu Gly Lys Ser Glu Phe Gly Glu Val Phe Leu Ala Lys Ala Gln  
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 Gly Leu Glu Glu Gly Val Ala Glu Thr Leu Val Leu Val Lys Ser Leu  
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 Gln Ser Lys Asp Glu Gln Gln Gln Leu Asp Phe Arg Arg Glu Leu Glu  
 835 840 845  
 Met Phe Gly Lys Leu Asn His Ala Asn Val Val Arg Leu Leu Gly Leu  
 850 855 860  
 Cys Arg Glu Ala Glu Pro His Tyr Met Val Leu Glu Tyr Val Asp Leu  
 865 870 875 880  
 Glu Asp Leu Lys Gln Phe Leu Arg Ile Ser Lys Ser Lys Asp Glu Lys  
 885 890 895  
 Leu Lys Ser Gln Pro Leu Ser Thr Lys Gln Lys Val Ala Leu Cys Thr  
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 Lys Asp Leu Ala Ala Arg Asn Cys Leu Val Ser Ala Gln Arg Gln Val  
 930 935 940  
 Lys Val Ser Ala Leu Gly Leu Ser Lys Asp Val Tyr Asn Ser Glu Tyr  
 945 950 955 960  
 Tyr His Phe Arg Gln Ala Trp Val Ala Leu Arg Trp Met Ser Pro Glu  
 965 970 975  
 Ala Ile Leu Glu Gly Asp Phe Ser Thr Lys Ser Asp Val Trp Ala Ser  
 980 985 990  
 Gly Val Leu Met Trp Glu Val Phe Thr His Gly Glu Met Pro His Gly  
 995 1000 1005

Gly Gln Ala Asp Asp Glu Val Leu Ala Asp Leu Gln Ala Gly Lys Ala  
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Arg Leu Pro Gln Pro Glu Gly Cys Pro Ser Lys Leu Tyr Arg Leu Met  
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Gln Arg Cys Trp Ala Leu Ser Pro Lys Asp Arg Pro Ser Phe Ser Glu  
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Gly Leu Ser Leu Ile Leu Cys Gln Leu Ser Leu Pro Ser Ile Leu Pro  
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Asn Glu Asn Glu Lys Val Val Gln Leu Asn Ser Ser Phe Ser Leu Arg  
 35 40 45

Cys Phe Gly Glu Ser Glu Val Ser Trp Gln Tyr Pro Met Ser Glu Glu  
 50 55 60

Glu Ser Ser Asp Val Glu Ile Arg Asn Glu Glu Asn Asn Ser Gly Leu  
 65 70 75 80

Phe Val Thr Val Leu Glu Val Ser Ser Ala Ser Ala Ala His Thr Gly  
 85 90 95

Leu Tyr Thr Cys Tyr Tyr Asn His Thr Gln Thr Glu Glu Asn Glu Leu  
 100 105 110

Glu Gly Arg His Ile Tyr Ile Tyr Val Pro Asp Pro Asp Val Ala Phe  
 115 120 125

Val Pro Leu Gly Met Thr Asp Tyr Leu Val Ile Val Glu Asp Asp Asp  
 130 135 140

Ser Ala Ile Ile Pro Cys Arg Thr Thr Asp Pro Glu Thr Pro Val Thr  
 145 150 155 160

Leu His Asn Ser Glu Gly Val Val Pro Ala Ser Tyr Asp Ser Arg Gln  
 165 170 175

Gly Phe Asn Gly Thr Phe Thr Val Gly Pro Tyr Ile Cys Glu Ala Thr  
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Val Lys Gly Lys Lys Phe Gln Thr Ile Pro Phe Asn Val Tyr Ala Leu  
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Lys Ala Thr Ser Glu Leu Asp Leu Glu Met Glu Ala Leu Lys Thr Val  
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 Tyr Lys Ser Gly Glu Thr Ile Val Val Thr Cys Ala Val Phe Asn Asn  
 225 230 235 240  
 Glu Val Val Asp Leu Gln Trp Thr Tyr Pro Gly Glu Val Lys Gly Lys  
 245 250 255  
 Gly Ile Thr Met Leu Glu Glu Ile Lys Val Pro Ser Ile Lys Leu Val  
 260 265 270  
 Tyr Thr Leu Thr Val Pro Glu Ala Thr Val Lys Asp Ser Gly Asp Tyr  
 275 280 285  
 Glu Cys Ala Ala Arg Gln Ala Thr Arg Glu Val Lys Glu Met Lys Lys  
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 Val Thr Ile Ser Val His Glu Lys Gly Phe Ile Glu Ile Lys Pro Thr  
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 Val Glu Val Arg Ala Tyr Pro Pro Arg Ile Ser Trp Leu Lys Asn  
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 420 425 430  
 Val Arg Cys Thr Ala Glu Gly Thr Pro Leu Pro Asp Ile Glu Trp Met  
 435 440 445  
 Ile Cys Lys Asp Ile Lys Lys Cys Asn Asn Glu Thr Ser Trp Thr Ile  
 450 455 460  
 Leu Ala Asn Asn Val Ser Asn Ile Ile Thr Glu Ile His Ser Arg Asp  
 465 470 475 480  
 Arg Ser Thr Val Glu Gly Arg Val Thr Phe Ala Lys Val Glu Glu Thr  
 485 490 495  
 Ile Ala Val Arg Cys Leu Ala Lys Asn Leu Leu Gly Ala Glu Asn Arg  
 500 505 510

Glu Leu Lys Leu Val Ala Pro Thr Leu Arg Ser Glu Leu Thr Val Ala  
515 520 525

Ala Ala Val Leu Val Leu Leu Val Ile Val Ile Ile Ser Leu Ile Val  
530 535 540

Leu Val Val Ile Trp Lys Gln Lys Pro Arg Tyr Glu Ile Arg Trp Arg  
545 550 555 560

Val Ile Glu Ser Ile Ser Pro Asp Gly His Glu Tyr Ile Tyr Val Asp  
565 570 575

Pro Met Gln Leu Pro Tyr Asp Ser Arg Trp Glu Phe Pro Arg Asp Gly  
580 585 590

Leu Val Leu Gly Arg Val Leu Gly Ser Gly Ala Phe Gly Lys Val Val  
595 600 605

Glu Gly Thr Ala Tyr Gly Leu Ser Arg Ser Gln Pro Val Met Lys Val  
610 615 620

Ala Val Lys Met Leu Lys Pro Thr Ala Arg Ser Ser Glu Lys Gln Ala  
625 630 635 640

Leu Met Ser Glu Leu Lys Ile Met Thr His Leu Gly Pro His Leu Asn  
645 650 655

Ile Val Asn Leu Leu Gly Ala Cys Thr Lys Ser Gly Pro Ile Tyr Ile  
660 665 670

Ile Thr Glu Tyr Cys Phe Tyr Gly Asp Leu Val Asn Tyr Leu His Lys  
675 680 685

Asn Arg Asp Ser Phe Leu Ser His His Pro Glu Lys Pro Lys Lys Glu  
690 695 700

Leu Asp Ile Phe Gly Leu Asn Pro Ala Asp Glu Ser Thr Arg Ser Tyr  
705 710 715 720

Val Ile Leu Ser Phe Glu Asn Asn Gly Asp Tyr Met Asp Met Lys Gln  
725 730 735

Ala Asp Thr Thr Gln Tyr Val Pro Met Leu Glu Arg Lys Glu Val Ser  
740 745 750

Lys Tyr Ser Asp Ile Gln Arg Ser Leu Tyr Asp Arg Pro Ala Ser Tyr  
755 760 765

Lys Lys Lys Ser Met Leu Asp Ser Glu Val Lys Asn Leu Leu Ser Asp  
770 775 780

Asp Asn Ser Glu Gly Leu Thr Leu Leu Asp Leu Leu Ser Phe Thr Tyr  
785 790 795 800

Gln Val Ala Arg Gly Met Glu Phe Leu Ala Ser Lys Asn Cys Val His  
805 810 815

Arg Asp Leu Ala Ala Arg Asn Val Leu Leu Ala Gln Gly Lys Ile Val  
 820 825 830  
 Lys Ile Cys Asp Phe Gly Leu Ala Arg Asp Ile Met His Asp Ser Asn  
 835 840 845  
 Tyr Val Ser Lys Gly Ser Thr Phe Leu Pro Val Lys Trp Met Ala Pro  
 850 855 860  
 Glu Ser Ile Phe Asp Asn Leu Tyr Thr Leu Ser Asp Val Trp Ser  
 865 870 875 880  
 Tyr Gly Ile Leu Leu Trp Glu Ile Phe Ser Leu Gly Gly Thr Pro Tyr  
 885 890 895  
 Pro Gly Met Met Val Asp Ser Thr Phe Tyr Asn Lys Ile Lys Ser Gly  
 900 905 910  
 Tyr Arg Met Ala Lys Pro Asp His Ala Thr Ser Glu Val Tyr Glu Ile  
 915 920 925  
 Met Val Lys Cys Trp Asn Ser Glu Pro Glu Lys Arg Pro Ser Phe Tyr  
 930 935 940  
 His Leu Ser Glu Ile Val Glu Asn Leu Leu Pro Gly Gln Tyr Lys Lys  
 945 950 955 960  
 Ser Tyr Glu Lys Ile His Leu Asp Phe Leu Lys Ser Asp His Pro Ala  
 965 970 975  
 Val Ala Arg Met Val Asp Ser Asp Asn Ala Tyr Ile Gly Val Thr Tyr  
 980 985 990  
 Lys Asn Glu Glu Asp Lys Leu Lys Asp Trp Glu Gly Gly Leu Asp Glu  
 995 1000 1005  
 Gln Arg Leu Ser Ala Asp Ser Gly Tyr Ile Ile Pro Leu Pro Asp Ile  
 1010 1015 1020  
 Asp Pro Val Pro Glu Glu Asp Leu Gly Lys Arg Asn Arg His Ser  
 1025 1030 1035 1040  
 Ser Gln Thr Ser Glu Glu Ser Ala Ile Glu Thr Gly Ser Ser Ser Ser  
 1045 1050 1055  
 Thr Phe Ile Lys Arg Glu Asp Glu Thr Ile Glu Asp Ile Asp Met Met  
 1060 1065 1070  
 Asp Asp Ile Gly Ile Asp Ser Ser Asp Leu Val Glu Asp Ser Phe Leu  
 1075 1080 1085

<210> 5  
 <211> 684  
 <212> PRT  
 <213> Homo sapiens  
 <400> 5

Gly Glu Val Gly Ala Asp Gly Ile Pro Gly Phe Pro Gly Leu Pro Gly  
 1 5 10 15

Arg Glu Gly Ile Ala Gly Pro Gln Gly Pro Lys Gly Asp Arg Gly Ser  
 20 25 30

Arg Gly Glu Lys Gly Asp Pro Gly Lys Asp Gly Leu Gly Gln Pro Gly  
 35 40 45

Leu Pro Gly Pro Arg Gly Pro Pro Gly Pro Val Val Tyr Val Ser Glu  
 50 55 60

Gln Asp Gly Ser Val Leu Ser Val Pro Gly Pro Glu Gly Arg Arg Gly  
 65 70 75 80

Phe Ala Gly Phe Pro Gly Pro Ala Gly Pro Lys Gly Asn Leu Gly Ser  
 85 90 95

Lys Gly Glu Leu Gly Ser Pro Gly Pro Lys Gly Glu Lys Gly Glu Pro  
 100 105 110

Gly Ser Ile Phe Ser Pro Asp Gly Gly Ala Leu Gly Pro Ala Gln Lys  
 115 120 125

Gly Ala Lys Gly Glu Pro Gly Phe Arg Gly Pro Pro Gly Leu Tyr Gly  
 130 135 140

Arg Pro Gly Tyr Lys Gly Glu Ile Gly Phe Pro Gly Arg Pro Gly Arg  
 145 150 155 160

Pro Gly Met Asn Gly Leu Lys Gly Glu Lys Gly Glu Pro Gly Asp Ala  
 165 170 175

Ser Leu Gly Phe Gly Met Arg Gly Met Pro Gly Pro Pro Gly Pro Pro  
 180 185 190

Gly Pro Pro Gly Pro Pro Gly Thr Pro Val Tyr Asp Ser Asn Val Phe  
 195 200 205

Ala Glu Ser Ser Arg Pro Gly Pro Pro Gly Leu Pro Gly Asn Gln Gly  
 210 215 220

Pro Pro Gly Pro Lys Gly Pro Lys Gly Glu Val Gly Pro Pro Gly Pro  
 225 230 235 240

Pro Gly Gln Phe Pro Phe Asp Phe Leu Gln Lys Glu Ala Glu Met Lys  
 245 250 255

Gly Glu Lys Gly Asp Arg Gly Asp Ala Gly Gln Lys Gly Glu Arg Gly  
 260 265 270

Glu Pro Gly Gly Gly Phe Phe Gly Ser Ser Leu Pro Gly Ala Pro  
 275 280 285

Gly Ala Pro Gly Pro Arg Gly Tyr Pro Gly Ile Pro Gly Pro Lys Gly  
 290 295 300

Glu Ser Ile Arg Gly Gln Pro Gly Pro Pro Gly Pro Gln Gly Pro Pro  
 305 310 315 320

Gly Ile Gly Tyr Glu Gly Arg Gln Gly Pro Pro Gly Pro Pro Gly Pro  
 325 330 335

Pro Gly Pro Pro Ser Phe Pro Gly Pro His Arg Gln Thr Ile Ser Val  
 340 345 350

Pro Gly Pro Pro Gly Pro Pro Gly Pro Pro Gly Pro Pro Gly Thr Met  
 355 360 365

Gly Ala Ser Ser Gly Gln Val Arg Leu Trp Ala Thr Arg Gln Ala Met  
 370 375 380

Leu Gly Gln Val His Glu Val Pro Glu Gly Trp Leu Ile Phe Val Ala  
 385 390 395 400

Glu Gln Glu Glu Leu Tyr Val Arg Val Gln Asn Gly Phe Arg Lys Val  
 405 410 415

Gln Leu Glu Ala Arg Thr Pro Leu Pro Arg Gly Thr Asp Asn Glu Val  
 420 425 430

Ala Ala Leu Gln Pro Pro Val Val Gln Leu His Asp Ser Asn Pro Tyr  
 435 440 445

Pro Arg Arg Glu His Pro His Pro Thr Ala Arg Pro Trp Arg Ala Asp  
 450 455 460

Asp Ile Leu Ala Ser Pro Pro Gly Leu Pro Glu Pro Gln Pro Tyr Pro  
 465 470 475 480

Gly Gly Pro His His Ser Ser Tyr Val His Cys Gly Pro Ala Arg Pro  
 485 490 495

Thr Ser Pro Pro Ala His Ser His Arg Asp Phe Gln Pro Val Leu His  
 500 505 510

Leu Val Ala Leu Asn Ser Pro Leu Ser Gly Gly Met Arg Gly Ile Arg  
 515 520 525

Gly Ala Asp Phe Gln Cys Phe Gln Gln Ala Arg Ala Val Gly Leu Ala  
 530 535 540

Gly Thr Phe Arg Ala Phe Leu Ser Ser Arg Leu Gln Asp Leu Tyr Ser  
 545 550 555 560

Ile Val Arg Arg Ala Asp Arg Ala Ala Val Pro Ile Val Asn Leu Lys  
 565 570 575

Asp Glu Leu Leu Phe Pro Ser Trp Glu Ala Leu Phe Ser Gly Ser Glu  
 580 585 590

Gly Pro Leu Lys Pro Gly Ala Arg Ile Phe Ser Phe Asp Gly Lys Asp  
 595 600 605

Val Leu Arg His Pro Thr Trp Pro Gln Lys Ser Val Trp His Gly Ser  
 610 615 620

Asp Pro Asn Gly Arg Arg Leu Thr Glu Ser Tyr Cys Glu Thr Trp Arg  
 625 630 635 640

Thr Glu Ala Pro Ser Ala Thr Gly Gln Ala Ser Ser Leu Leu Gly Gly  
 645 650 655

Arg Leu Leu Gly Gln Ser Ala Ala Ser Cys His His Ala Tyr Ile Val  
 660 665 670

Leu Cys Ile Glu Asn Ser Phe Met Thr Ala Ser Lys  
 675 680

<210> 6

<211> 969

<212> PRT

<213> Homo sapiens

<400> 6

Met Pro Pro Arg Ala Pro Pro Ala Pro Gly Pro Arg Pro Pro Pro Arg  
 1 5 10 15

Ala Ala Ala Ala Thr Asp Thr Ala Ala Gly Ala Gly Gly Ala Gly Gly  
 20 25 30

Ala Gly Gly Ala Gly Gly Pro Gly Phe Arg Pro Leu Ala Pro Arg Pro  
 35 40 45

Trp Arg Trp Leu Leu Leu Ala Leu Pro Ala Ala Cys Ser Ala Pro  
 50 55 60

Pro Pro Arg Pro Val Tyr Thr Asn His Trp Ala Val Gln Val Leu Gly  
 65 70 75 80

Gly Pro Ala Glu Ala Asp Arg Val Ala Ala Ala His Gly Tyr Leu Asn  
 85 90 95

Leu Gly Gln Ile Gly Asn Leu Glu Asp Tyr Tyr His Phe Tyr His Ser  
 100 105 110

Lys Thr Phe Lys Arg Ser Thr Leu Ser Ser Arg Gly Pro His Thr Phe  
 115 120 125

Leu Arg Met Asp Pro Gln Val Lys Trp Leu Gln Gln Gln Glu Val Lys  
 130 135 140

Arg Arg Val Lys Arg Gln Val Arg Ser Asp Pro Gln Ala Leu Tyr Phe  
 145 150 155 160

Asn Asp Pro Ile Trp Ser Asn Met Trp Tyr Leu His Cys Gly Asp Lys  
 165 170 175

Asn Ser Arg Cys Arg Ser Glu Met Asn Val Gln Ala Ala Trp Lys Arg  
 180 185 190

Gly Tyr Thr Gly Lys Asn Val Val Val Thr Ile Leu Asp Asp Gly Ile  
 195 200 205

Glu Arg Asn His Pro Asp Leu Ala Pro Asn Tyr Asp Ser Tyr Ala Ser  
 210 215 220

Tyr Asp Val Asn Gly Asn Asp Tyr Asp Pro Ser Pro Arg Tyr Asp Ala  
 225 230 235 240

Ser Asn Glu Asn Lys His Gly Thr Arg Cys Ala Gly Glu Val Ala Ala  
 245 250 255

Ser Ala Asn Asn Ser Tyr Cys Ile Val Gly Ile Ala Tyr Asn Ala Lys  
 260 265 270

Ile Gly Gly Ile Arg Met Leu Asp Gly Asp Val Thr Asp Val Val Glu  
 275 280 285

Ala Lys Ser Leu Gly Ile Arg Pro Asn Tyr Ile Asp Ile Tyr Ser Ala  
 290 295 300

Ser Trp Gly Pro Asp Asp Asp Gly Lys Thr Val Asp Gly Pro Gly Arg  
 305 310 315 320

Leu Ala Lys Gln Ala Phe Glu Tyr Gly Ile Lys Lys Gly Arg Gln Gly  
 325 330 335

Leu Gly Ser Ile Phe Val Trp Ala Ser Gly Asn Gly Gly Arg Glu Gly  
 340 345 350

Asp Tyr Cys Ser Cys Asp Gly Tyr Thr Asn Ser Ile Tyr Thr Ile Ser  
 355 360 365

Val Ser Ser Ala Thr Glu Asn Gly Tyr Lys Pro Trp Tyr Leu Glu Glu  
 370 375 380

Cys Ala Ser Thr Leu Ala Thr Thr Tyr Ser Ser Gly Ala Phe Tyr Glu  
 385 390 395 400

Arg Lys Ile Val Thr Thr Asp Leu Arg Gln Arg Cys Thr Asp Gly His  
 405 410 415

Thr Gly Thr Ser Val Ser Ala Pro Met Val Ala Gly Ile Ile Ala Leu  
 420 425 430

Ala Leu Glu Ala Asn Ser Gln Leu Thr Trp Arg Asp Val Gln His Leu  
 435 440 445

Leu Val Lys Thr Ser Arg Pro Ala His Leu Lys Ala Ser Asp Trp Lys  
 450 455 460

Val Asn Gly Ala Gly His Lys Val Ser His Phe Tyr Gly Phe Gly Leu  
 465 470 475 480

Val Asp Ala Glu Ala Leu Val Val Glu Ala Lys Lys Trp Thr Ala Val  
 485 490 495

Pro Ser Gln His Met Cys Val Ala Ala Ser Asp Lys Arg Pro Arg Ser  
500 505 510

Ile Pro Leu Val Gln Val Leu Arg Thr Thr Ala Leu Thr Ser Ala Cys  
515 520 525

Ala Glu His Ser Asp Gln Arg Val Val Tyr Leu Glu His Val Val Val  
530 535 540

Arg Thr Ser Ile Ser His Pro Arg Arg Gly Asp Leu Gln Ile Tyr Leu  
545 550 555 560

Val Ser Pro Ser Gly Thr Lys Ser Gln Leu Leu Ala Lys Arg Leu Leu  
565 570 575

Asp Leu Ser Asn Glu Gly Phe Thr Asn Trp Glu Phe Met Thr Val His  
580 585 590

Cys Trp Gly Glu Lys Ala Glu Gly Gln Trp Thr Leu Glu Ile Gln Asp  
595 600 605

Leu Pro Ser Gln Val Arg Asn Pro Glu Lys Gln Gly Lys Leu Lys Glu  
610 615 620

Trp Ser Leu Ile Leu Tyr Gly Thr Ala Glu His Pro Tyr His Thr Phe  
625 630 635 640

Ser Ala His Gln Ser Arg Ser Arg Met Leu Glu Leu Ser Ala Pro Glu  
645 650 655

Leu Glu Pro Pro Lys Ala Ala Leu Ser Pro Ser Gln Val Glu Val Pro  
660 665 670

Glu Asp Glu Glu Asp Tyr Thr Ala Gln Ser Thr Pro Gly Ser Ala Asn  
675 680 685

Ile Leu Gln Thr Ser Val Cys His Pro Glu Cys Gly Asp Lys Gly Cys  
690 695 700

Asp Gly Pro Asn Ala Asp Gln Cys Leu Asn Cys Val His Phe Ser Leu  
705 710 715 720

Gly Ser Val Lys Thr Ser Arg Lys Cys Val Ser Val Cys Pro Leu Gly  
725 730 735

Tyr Phe Gly Asp Thr Ala Ala Arg Arg Cys Arg Arg Cys His Lys Gly  
740 745 750

Cys Glu Thr Cys Ser Ser Arg Ala Ala Thr Gln Cys Leu Ser Cys Arg  
755 760 765

Arg Gly Phe Tyr His His Gln Glu Met Asn Thr Cys Val Thr Leu Cys  
770 775 780

Pro Ala Gly Phe Tyr Ala Asp Glu Ser Gln Lys Asn Cys Leu Lys Cys  
785 790 795 800

His	Pro	Ser	Cys	Lys	Lys	Cys	Val	Asp	Glu	Pro	Glu	Lys	Cys	Thr	Val
				805				810						815	
Cys	Lys	Glu	Gly	Phe	Ser	Leu	Ala	Arg	Gly	Ser	Cys	Ile	Pro	Asp	Cys
				820				825						830	
Glu	Pro	Gly	Thr	Tyr	Phe	Asp	Ser	Glu	Leu	Ile	Arg	Cys	Gly	Glu	Cys
				835			840				845				
His	His	Thr	Cys	Gly	Thr	Cys	Val	Gly	Pro	Gly	Arg	Glu	Glu	Cys	Ile
					850		855				860				
His	Cys	Ala	Lys	Asn	Phe	His	Phe	His	Asp	Trp	Lys	Cys	Val	Pro	Ala
					865		870			875					880
Cys	Gly	Glu	Gly	Phe	Tyr	Pro	Glu	Glu	Met	Pro	Gly	Leu	Pro	His	Lys
				885			890				895				
Val	Cys	Arg	Arg	Cys	Asp	Glu	Asn	Cys	Leu	Ser	Cys	Ala	Gly	Ser	Ser
				900			905				910				
Arg	Asn	Cys	Ser	Arg	Cys	Lys	Thr	Gly	Phe	Thr	Gln	Leu	Gly	Thr	Ser
				915			920				925				
Cys	Ile	Thr	Asn	His	Thr	Cys	Ser	Asn	Ala	Asp	Glu	Thr	Phe	Cys	Glu
					930		935				940				
Met	Val	Lys	Ser	Asn	Arg	Leu	Cys	Glu	Arg	Lys	Leu	Phe	Ile	Gln	Phe
					945		950			955					960
Cys	Cys	Arg	Thr	Cys	Leu	Leu	Ala	Gly							
				965											

<210> 7  
 <211> 3070  
 <212> PRT  
 <213> Homo sapiens

<400> 7															
Met	Pro	Gly	Ala	Ala	Gly	Val	Leu	Leu	Leu	Leu	Leu	Ser	Gly	Gly	
1				5				10					15		
Leu	Gly	Gly	Val	Gln	Ala	Gln	Arg	Pro	Gln	Gln	Gln	Arg	Gln	Ser	Gln
				20				25					30		
Ala	His	Gln	Gln	Arg	Gly	Leu	Phe	Pro	Ala	Val	Leu	Asn	Leu	Ala	Ser
				35			40						45		
Asn	Ala	Leu	Ile	Thr	Thr	Asn	Ala	Thr	Cys	Gly	Glu	Lys	Gly	Pro	Glu
				50			55				60				
Met	Tyr	Cys	Lys	Leu	Val	Glu	His	Val	Pro	Gly	Gln	Pro	Val	Arg	Asn
				65			70			75			80		
Pro	Gln	Cys	Arg	Ile	Cys	Asn	Gln	Asn	Ser	Ser	Asn	Pro	Asn	Gln	Arg
					85			90					95		

His Pro Ile Thr Asn Ala Ile Asp Gly Lys Asn Thr Trp Trp Gln Ser  
 100 105 110  
 Pro Ser Ile Lys Asn Gly Ile Glu Tyr His Tyr Val Thr Ile Thr Leu  
 115 120 125  
 Asp Leu Gln Gln Val Phe Gln Ile Ala Tyr Val Ile Val Lys Ala Ala  
 130 135 140  
 Asn Ser Pro Arg Pro Gly Asn Trp Ile Leu Glu Arg Ser Leu Asp Asp  
 145 150 155 160  
 Val Glu Tyr Lys Pro Trp Gln Tyr His Ala Val Thr Asp Thr Glu Cys  
 165 170 175  
 Leu Thr Leu Tyr Asn Ile Tyr Pro Arg Thr Gly Pro Pro Ser Tyr Ala  
 180 185 190  
 Lys Asp Asp Glu Val Ile Cys Thr Ser Phe Tyr Ser Lys Ile His Pro  
 195 200 205  
 Leu Glu Asn Gly Glu Ile His Ile Ser Leu Ile Asn Gly Arg Pro Ser  
 210 215 220  
 Ala Asp Asp Pro Ser Pro Glu Leu Leu Glu Phe Thr Ser Ala Arg Tyr  
 225 230 235 240  
 Ile Arg Leu Arg Phe Gln Arg Ile Arg Thr Leu Asn Ala Asp Leu Met  
 245 250 255  
 Met Phe Ala His Lys Asp Pro Arg Glu Ile Asp Pro Ile Val Thr Arg  
 260 265 270  
 Arg Tyr Tyr Tyr Ser Val Lys Asp Ile Ser Val Gly Gly Met Cys Ile  
 275 280 285  
 Cys Tyr Gly His Ala Arg Ala Cys Pro Leu Asp Pro Ala Thr Asn Lys  
 290 295 300  
 Ser Arg Cys Glu Cys Glu His Asn Thr Cys Gly Asp Ser Cys Asp Gln  
 305 310 315 320  
 Cys Cys Pro Gly Phe His Gln Lys Pro Trp Arg Ala Gly Thr Phe Leu  
 325 330 335  
 Thr Lys Thr Glu Cys Glu Ala Cys Asn Cys His Gly Lys Ala Glu Glu  
 340 345 350  
 Cys Tyr Tyr Asp Glu Asn Val Ala Arg Arg Asn Leu Ser Leu Asn Ile  
 355 360 365  
 Arg Gly Lys Tyr Ile Gly Gly Val Cys Ile Asn Cys Thr Gln Asn  
 370 375 380  
 Thr Ala Gly Ile Asn Cys Glu Thr Cys Thr Asp Gly Phe Phe Arg Pro  
 385 390 395 400

Lys Gly Val Ser Pro Asn Tyr Pro Arg Pro Cys Gln Pro Cys His Cys  
 405 410 415  
 Asp Pro Ile Gly Ser Leu Asn Glu Val Cys Val Lys Asp Glu Lys His  
 420 425 430  
 Ala Arg Arg Gly Leu Ala Pro Gly Ser Cys His Cys Lys Thr Gly Phe  
 435 440 445  
 Gly Gly Val Ser Cys Asp Arg Cys Ala Arg Gly Tyr Thr Gly Tyr Pro  
 450 455 460  
 Asp Cys Lys Ala Cys Asn Cys Ser Gly Leu Gly Ser Lys Asn Glu Asp  
 465 470 475 480  
 Pro Cys Phe Gly Pro Cys Ile Cys Lys Glu Asn Val Glu Gly Asp  
 485 490 495  
 Cys Ser Arg Cys Lys Ser Gly Phe Phe Asn Leu Gln Glu Asp Asn Trp  
 500 505 510  
 Lys Gly Cys Asp Glu Cys Phe Cys Ser Gly Val Ser Asn Arg Cys Gln  
 515 520 525  
 Ser Ser Tyr Trp Thr Tyr Gly Lys Ile Gln Asp Met Ser Gly Trp Tyr  
 530 535 540  
 Leu Thr Asp Leu Pro Gly Arg Ile Arg Val Ala Pro Gln Gln Asp Asp  
 545 550 555 560  
 Leu Asp Ser Pro Gln Gln Ile Ser Ile Ser Asn Ala Glu Ala Arg Gln  
 565 570 575  
 Ala Leu Pro His Ser Tyr Tyr Trp Ser Ala Pro Ala Pro Tyr Leu Gly  
 580 585 590  
 Asn Lys Leu Pro Ala Val Gly Gly Gln Leu Thr Phe Thr Ile Ser Tyr  
 595 600 605  
 Asp Leu Glu Glu Glu Glu Asp Thr Glu Arg Val Leu Gln Leu Met  
 610 615 620  
 Ile Ile Leu Glu Gly Asn Asp Leu Ser Ile Ser Thr Ala Gln Asp Glu  
 625 630 635 640  
 Val Tyr Leu His Pro Ser Glu Glu His Thr Asn Val Leu Leu Leu Lys  
 645 650 655  
 Glu Glu Ser Phe Thr Ile His Gly Thr His Phe Pro Val Arg Arg Lys  
 660 665 670  
 Glu Phe Met Thr Val Leu Ala Asn Leu Lys Arg Val Leu Leu Gln Ile  
 675 680 685  
 Thr Tyr Ser Phe Gly Met Asp Ala Ile Phe Arg Leu Ser Ser Val Asn  
 690 695 700

Leu Glu Ser Ala Val Ser Tyr Pro Thr Asp Gly Ser Ile Ala Ala Ala  
 705 710 715 720  
 Val Glu Val Cys Gln Cys Pro Pro Gly Tyr Thr Gly Ser Ser Cys Glu  
 725 730 735  
 Ser Cys Trp Pro Arg His Arg Arg Val Asn Gly Thr Ile Phe Gly Gly  
 740 745 750  
 Ile Cys Glu Pro Cys Gln Cys Phe Gly His Ala Glu Ser Cys Asp Asp  
 755 760 765  
 Val Thr Gly Glu Cys Leu Asn Cys Lys Asp His Thr Gly Gly Pro Tyr  
 770 775 780  
 Cys Asp Lys Cys Leu Pro Gly Phe Tyr Gly Glu Pro Thr Lys Gly Thr  
 785 790 795 800  
 Ser Glu Asp Cys Gln Pro Cys Ala Cys Pro Leu Asn Ile Pro Ser Asn  
 805 810 815  
 Asn Phe Ser Pro Thr Cys His Leu Asp Arg Ser Leu Gly Leu Ile Cys  
 820 825 830  
 Asp Gly Cys Pro Val Gly Tyr Thr Gly Pro Arg Cys Glu Arg Cys Ala  
 835 840 845  
 Glu Gly Tyr Phe Gly Gln Pro Ser Val Pro Gly Gly Ser Cys Gln Pro  
 850 855 860  
 Cys Gln Cys Asn Asp Asn Leu Asp Phe Ser Ile Pro Gly Ser Cys Asp  
 865 870 875 880  
 Ser Leu Ser Gly Ser Cys Leu Ile Cys Lys Pro Gly Thr Thr Gly Arg  
 885 890 895  
 Tyr Cys Glu Leu Cys Ala Asp Gly Tyr Phe Gly Asp Ala Val Asp Ala  
 900 905 910  
 Lys Asn Cys Gln Pro Cys Arg Cys Asn Ala Gly Gly Ser Phe Ser Glu  
 915 920 925  
 Val Cys His Ser Gln Thr Gly Gln Cys Glu Cys Arg Ala Asn Val Gln  
 930 935 940  
 Gly Gln Arg Cys Asp Lys Cys Lys Ala Gly Thr Phe Gly Leu Gln Ser  
 945 950 955 960  
 Ala Arg Gly Cys Val Pro Cys Asn Cys Asn Ser Phe Gly Ser Lys Ser  
 965 970 975  
 Phe Asp Cys Glu Glu Ser Gly Gln Cys Trp Cys Gln Pro Gly Val Thr  
 980 985 990  
 Gly Lys Lys Cys Asp Arg Cys Ala His Gly Tyr Phe Asn Phe Gln Glu  
 995 1000 1005

Gly Gly Cys Thr Ala Cys Glu Cys Ser His Leu Gly Asn Asn Cys Asp  
 1010 1015 1020

Pro Lys Thr Gly Arg Cys Ile Cys Pro Pro Asn Thr Ile Gly Glu Lys  
 1025 1030 1035 1040

Cys Ser Lys Cys Ala Pro Asn Thr Trp Gly His Ser Ile Thr Thr Gly  
 1045 1050 1055

Cys Lys Ala Cys Asn Cys Ser Thr Val Gly Ser Leu Asp Phe Gln Cys  
 1060 1065 1070

Asn Val Asn Thr Gly Gln Cys Asn Cys His Pro Lys Phe Ser Gly Ala  
 1075 1080 1085

Lys Cys Thr Glu Cys Ser Arg Gly His Trp Asn Tyr Pro Arg Cys Asn  
 1090 1095 1100

Leu Cys Asp Cys Phe Leu Pro Gly Thr Asp Ala Thr Thr Cys Asp Ser  
 1105 1110 1115 1120

Glu Thr Lys Lys Cys Ser Cys Ser Asp Gln Thr Gly Gln Cys Thr Cys  
 1125 1130 1135

Lys Val Asn Val Glu Gly Ile His Cys Asp Arg Cys Arg Pro Gly Lys  
 1140 1145 1150

Phe Gly Leu Asp Ala Lys Asn Pro Leu Gly Cys Ser Ser Cys Tyr Cys  
 1155 1160 1165

Phe Gly Thr Thr Thr Gln Cys Ser Glu Ala Lys Gly Leu Ile Arg Thr  
 1170 1175 1180

Trp Val Thr Leu Lys Ala Glu Gln Thr Ile Leu Pro Leu Val Asp Glu  
 1185 1190 1195 1200

Ala Leu Gln His Thr Thr Lys Gly Ile Val Phe Gln His Pro Glu  
 1205 1210 1215

Ile Val Ala His Met Asp Leu Met Arg Glu Asp Leu His Leu Glu Pro  
 1220 1225 1230

Phe Tyr Trp Lys Leu Pro Glu Gln Phe Glu Gly Lys Lys Leu Met Ala  
 1235 1240 1245

Tyr Gly Gly Lys Leu Lys Tyr Ala Ile Tyr Phe Glu Ala Arg Glu Glu  
 1250 1255 1260

Thr Gly Phe Ser Thr Tyr Asn Pro Gln Val Ile Ile Arg Gly Gly Thr  
 1265 1270 1275 1280

Pro Thr His Ala Arg Ile Ile Val Arg His Met Ala Ala Pro Leu Ile  
 1285 1290 1295

Gly Gln Leu Thr Arg His Glu Ile Glu Met Thr Glu Lys Glu Trp Lys  
 1300 1305 1310

Tyr Tyr Gly Asp Asp Pro Arg Val His Arg Thr Val Thr Arg Glu Asp  
 1315 1320 1325  
 Phe Leu Asp Ile Leu Tyr Asp Ile His Tyr Ile Leu Ile Lys Ala Thr  
 1330 1335 1340  
 Tyr Gly Asn Phe Met Arg Gln Ser Arg Ile Ser Glu Ile Ser Met Glu  
 1345 1350 1355 1360  
 Val Ala Glu Gln Gly Arg Gly Thr Thr Met Thr Pro Pro Ala Asp Leu  
 1365 1370 1375  
 Ile Glu Lys Cys Asp Cys Pro Leu Gly Tyr Ser Gly Leu Ser Cys Glu  
 1380 1385 1390  
 Ala Cys Leu Pro Gly Phe Tyr Arg Leu Arg Ser Gln Pro Gly Gly Arg  
 1395 1400 1405  
 Thr Pro Gly Pro Thr Leu Gly Thr Cys Val Pro Cys Gln Cys Asn Gly  
 1410 1415 1420  
 His Ser Ser Leu Cys Asp Pro Glu Thr Ser Ile Cys Gln Asn Cys Gln  
 1425 1430 1435 1440  
 His His Thr Ala Gly Asp Phe Cys Glu Arg Cys Ala Leu Gly Tyr Tyr  
 1445 1450 1455  
 Gly Ile Val Lys Gly Leu Pro Asn Asp Cys Gln Gln Cys Ala Cys Pro  
 1460 1465 1470  
 Leu Ile Ser Ser Asn Asn Phe Ser Pro Ser Cys Val Ala Glu Gly  
 1475 1480 1485  
 Leu Asp Asp Tyr Arg Cys Thr Ala Cys Pro Arg Gly Tyr Glu Gly Gln  
 1490 1495 1500  
 Tyr Cys Glu Arg Cys Ala Pro Gly Tyr Thr Gly Ser Pro Gly Asn Pro  
 1505 1510 1515 1520  
 Gly Gly Ser Cys Gln Glu Cys Glu Cys Asp Pro Tyr Gly Ser Leu Pro  
 1525 1530 1535  
 Val Pro Cys Asp Pro Val Thr Gly Phe Cys Thr Cys Arg Pro Gly Ala  
 1540 1545 1550  
 Thr Gly Arg Lys Cys Asp Gly Cys Lys His Trp His Ala Arg Glu Gly  
 1555 1560 1565  
 Trp Glu Cys Val Phe Cys Gly Asp Glu Cys Thr Gly Leu Leu Leu Gly  
 1570 1575 1580  
 Asp Leu Ala Arg Leu Glu Gln Met Val Met Ser Ile Asn Leu Thr Gly  
 1585 1590 1595 1600  
 Pro Leu Pro Ala Pro Tyr Lys Met Leu Tyr Gly Leu Glu Asn Met Thr  
 1605 1610 1615

Gln Glu Leu Lys His Leu Leu Ser Pro Gln Arg Ala Pro Glu Arg Leu  
 1620 1625 1630

Ile Gln Leu Ala Glu Gly Asn Leu Asn Thr Leu Val Thr Glu Met Asn  
 1635 1640 1645

Glu Leu Leu Thr Arg Ala Thr Lys Val Thr Ala Asp Gly Glu Gln Thr  
 1650 1655 1660

Gly Gln Asp Ala Glu Arg Thr Asn Thr Arg Ala Lys Ser Leu Gly Glu  
 1665 1670 1675 1680

Phe Ile Lys Glu Leu Ala Arg Asp Ala Glu Ala Val Asn Glu Lys Ala  
 1685 1690 1695

Ile Lys Leu Asn Glu Thr Leu Gly Thr Arg Asp Glu Ala Phe Glu Arg  
 1700 1705 1710

Asn Leu Glu Gly Leu Gln Lys Glu Ile Asp Gln Met Ile Lys Glu Leu  
 1715 1720 1725

Arg Arg Lys Asn Leu Glu Thr Gln Lys Glu Ile Ala Glu Asp Glu Leu  
 1730 1735 1740

Val Ala Ala Glu Ala Leu Leu Lys Lys Val Lys Lys Leu Phe Gly Glu  
 1745 1750 1755 1760

Ser Arg Gly Glu Asn Glu Glu Met Glu Lys Asp Leu Arg Glu Lys Leu  
 1765 1770 1775

Ala Asp Tyr Lys Asn Lys Val Asp Asp Ala Trp Asp Leu Leu Arg Glu  
 1780 1785 1790

Ala Thr Asp Lys Ile Arg Glu Ala Asn Arg Leu Phe Ala Val Asn Gln  
 1795 1800 1805

Lys Asn Met Thr Ala Leu Glu Lys Lys Glu Ala Val Glu Ser Gly  
 1810 1815 1820

Lys Arg Gln Ile Glu Asn Thr Leu Lys Glu Gly Asn Asp Ile Leu Asp  
 1825 1830 1835 1840

Glu Ala Asn Arg Leu Ala Asp Glu Ile Asn Ser Ile Ile Asp Tyr Val  
 1845 1850 1855

Glu Asp Ile Gln Thr Lys Leu Pro Pro Met Ser Glu Glu Leu Asn Asp  
 1860 1865 1870

Lys Ile Asp Asp Leu Ser Gln Glu Ile Lys Asp Arg Lys Leu Ala Glu  
 1875 1880 1885

Lys Val Ser Gln Ala Glu Ser His Ala Ala Gln Leu Asn Asp Ser Ser  
 1890 1895 1900

Ala Val Leu Asp Gly Ile Leu Asp Glu Ala Lys Asn Ile Ser Phe Asn  
 1905 1910 1915 1920

Ala Thr Ala Ala Phe Lys Ala Tyr Ser Asn Ile Lys Asp Tyr Ile Asp  
 1925 1930 1935

Glu Ala Glu Lys Val Ala Lys Glu Ala Lys Asp Leu Ala His Glu Ala  
 1940 1945 1950

Thr Lys Leu Ala Thr Gly Pro Arg Gly Leu Leu Lys Glu Asp Ala Lys  
 1955 1960 1965

Gly Cys Leu Gln Lys Ser Phe Arg Ile Leu Asn Glu Ala Lys Lys Leu  
 1970 1975 1980

Ala Asn Asp Val Lys Glu Asn Glu Asp His Leu Asn Gly Leu Lys Thr  
 1985 1990 1995 2000

Arg Ile Glu Asn Ala Asp Ala Arg Asn Gly Asp Leu Leu Arg Thr Leu  
 2005 2010 2015

Asn Asp Thr Leu Gly Lys Leu Ser Ala Ile Pro Asn Asp Thr Ala Ala  
 2020 2025 2030

Lys Leu Gln Ala Val Lys Asp Lys Ala Arg Gln Ala Asn Asp Thr Ala  
 2035 2040 2045

Lys Asp Val Leu Ala Gln Ile Thr Glu Leu His Gln Asn Leu Asp Gly  
 2050 2055 2060

Leu Lys Lys Asn Tyr Asn Lys Leu Ala Asp Ser Val Ala Lys Thr Asn  
 2065 2070 2075 2080

Ala Val Val Lys Asp Pro Ser Lys Asn Lys Ile Ile Ala Asp Ala Asp  
 2085 2090 2095

Ala Thr Val Lys Asn Leu Glu Gln Glu Ala Asp Arg Leu Ile Asp Lys  
 2100 2105 2110

Leu Lys Pro Ile Lys Glu Leu Glu Asp Asn Leu Lys Lys Asn Ile Ser  
 2115 2120 2125

Glu Ile Lys Glu Leu Ile Asn Gln Ala Arg Lys Gln Ala Asn Ser Ile  
 2130 2135 2140

Lys Val Ser Val Ser Ser Gly Gly Asp Cys Ile Arg Thr Tyr Lys Pro  
 2145 2150 2155 2160

Glu Ile Lys Lys Gly Ser Tyr Asn Asn Ile Val Val Asn Val Lys Thr  
 2165 2170 2175

Ala Val Ala Asp Asn Leu Leu Phe Tyr Leu Gly Ser Ala Lys Phe Ile  
 2180 2185 2190

Asp Phe Leu Ala Ile Glu Met Arg Lys Gly Lys Val Ser Phe Leu Trp  
 2195 2200 2205

Asp Val Gly Ser Gly Val Gly Arg Val Glu Tyr Pro Asp Leu Thr Ile  
 2210 2215 2220

Asp Asp Ser Tyr Trp Tyr Arg Ile Val Ala Ser Arg Thr Gly Arg Asn  
 2225 2230 2235 2240  
 Gly Thr Ile Ser Val Arg Ala Leu Asp Gly Pro Lys Ala Ser Ile Val  
 2245 2250 2255  
 Pro Ser Thr His His Ser Thr Ser Pro Pro Gly Tyr Thr Ile Leu Asp  
 2260 2265 2270  
 Val Asp Ala Asn Ala Met Leu Phe Val Gly Gly Leu Thr Gly Lys Leu  
 2275 2280 2285  
 Lys Lys Ala Asp Ala Val Arg Val Ile Thr Phe Thr Gly Cys Met Gly  
 2290 2295 2300  
 Glu Thr Tyr Phe Asp Asn Lys Pro Ile Gly Leu Trp Asn Phe Arg Glu  
 2305 2310 2315 2320  
 Lys Glu Gly Asp Cys Lys Gly Cys Thr Val Ser Pro Gln Val Glu Asp  
 2325 2330 2335  
 Ser Glu Gly Thr Ala Thr Arg Asp Leu Arg Asp Phe Met Ser Val Glu  
 2340 2345 2350  
 Leu Thr Asp Gly His Ile Lys Val Ser Tyr Asp Leu Gly Ser Gly Met  
 2355 2360 2365  
 Ala Ser Val Val Ser Asn Gln Asn His Asn Asp Gly Lys Trp Lys Ser  
 2370 2375 2380  
 Phe Thr Leu Ser Arg Ile Gln Lys Gln Ala Asn Ile Ser Ile Val Asp  
 2385 2390 2395 2400  
 Ile Asp Thr Asn Gln Glu Glu Asn Ile Ala Thr Ser Ser Gly Asn  
 2405 2410 2415  
 Asn Phe Gly Leu Asp Leu Lys Ala Asp Asp Lys Ile Tyr Phe Gly Gly  
 2420 2425 2430  
 Leu Pro Thr Leu Arg Asn Leu Ser Met Lys Ala Arg Pro Glu Val Asn  
 2435 2440 2445  
 Leu Lys Lys Tyr Ser Gly Cys Leu Lys Asp Ile Glu Ile Ser Arg Thr  
 2450 2455 2460  
 Pro Tyr Asn Ile Leu Ser Ser Pro Asp Tyr Val Gly Val Thr Lys Gly  
 2465 2470 2475 2480  
 Cys Ser Leu Glu Asn Val Tyr Thr Val Ser Phe Pro Lys Pro Gly Phe  
 2485 2490 2495  
 Val Glu Leu Ser Pro Val Pro Ile Asp Val Gly Thr Glu Ile Asn Leu  
 2500 2505 2510  
 Ser Phe Ser Thr Lys Asn Glu Ser Gly Ile Ile Leu Leu Gly Ser Gly  
 2515 2520 2525

Gly Thr Pro Ala Pro Pro Arg Arg Lys Arg Arg Gln Thr Gly Gln Ala  
 2530 2535 2540

Tyr Tyr Val Ile Leu Leu Asn Arg Gly Arg Leu Glu Val His Leu Ser  
 2545 2550 2555 2560

Thr Gly Ala Arg Thr Met Arg Lys Ile Val Ile Arg Pro Glu Pro Asn  
 2565 2570 2575

Leu Phe His Asp Gly Arg Glu His Ser Val His Val Glu Arg Thr Arg  
 2580 2585 2590

Gly Ile Phe Thr Val Gln Val Asp Glu Asn Arg Arg Tyr Met Gln Asn  
 2595 2600 2605

Leu Thr Val Glu Gln Pro Ile Glu Val Lys Lys Leu Phe Val Gly Gly  
 2610 2615 2620

Ala Pro Pro Glu Phe Gln Pro Ser Pro Leu Arg Asn Ile Pro Pro Phe  
 2625 2630 2635 2640

Glu Gly Cys Ile Trp Asn Leu Val Ile Asn Ser Val Pro Met Asp Phe  
 2645 2650 2655

Ala Arg Pro Val Ser Phe Lys Asn Ala Asp Ile Gly Arg Cys Ala His  
 2660 2665 2670

Gln Lys Leu Arg Glu Asp Glu Asp Gly Ala Ala Pro Ala Glu Ile Val  
 2675 2680 2685

Ile Gln Pro Glu Pro Val Pro Thr Pro Ala Phe Pro Thr Pro Thr Pro  
 2690 2695 2700

Val Leu Thr His Gly Pro Cys Ala Ala Glu Ser Glu Pro Ala Leu Leu  
 2705 2710 2715 2720

Ile Gly Ser Lys Gln Phe Gly Leu Ser Arg Asn Ser His Ile Ala Ile  
 2725 2730 2735

Ala Phe Asp Asp Thr Lys Val Lys Asn Arg Leu Thr Ile Glu Leu Glu  
 2740 2745 2750

Val Arg Thr Glu Ala Glu Ser Gly Leu Leu Phe Tyr Met Ala Ala Ile  
 2755 2760 2765

Asn His Ala Asp Phe Ala Thr Val Gln Leu Arg Asn Gly Leu Pro Tyr  
 2770 2775 2780

Phe Ser Tyr Asp Leu Gly Ser Gly Asp Thr His Thr Met Ile Pro Thr  
 2785 2790 2795 2800

Lys Ile Asn Asp Gly Gln Trp His Lys Ile Lys Ile Met Arg Ser Lys  
 2805 2810 2815

Gln Glu Gly Ile Leu Tyr Val Asp Gly Ala Ser Asn Arg Thr Ile Ser  
 2820 2825 2830

Pro Lys Lys Ala Asp Ile Leu Asp Val Val Gly Met Leu Tyr Val Gly  
 2835 2840 2845

Gly Leu Pro Ile Asn Tyr Thr Arg Arg Ile Gly Pro Val Thr Tyr  
 2850 2855 2860

Ser Ile Asp Gly Cys Val Arg Asn Leu His Met Ala Glu Ala Pro Ala  
 2865 2870 2875 2880

Asp Leu Glu Gln Pro Thr Ser Ser Phe His Val Gly Thr Cys Phe Ala  
 2885 2890 2895

Asn Ala Gln Arg Gly Thr Tyr Phe Asp Gly Thr Gly Phe Ala Lys Ala  
 2900 2905 2910

Val Gly Gly Phe Lys Val Gly Leu Asp Leu Leu Val Glu Phe Glu Phe  
 2915 2920 2925

Ala Thr Thr Thr Thr Gly Val Leu Leu Gly Ile Ser Ser Gln Lys  
 2930 2935 2940

Met Asp Gly Met Gly Ile Glu Met Ile Asp Glu Lys Leu Met Phe His  
 2945 2950 2955 2960

Val Asp Asn Gly Ala Gly Arg Phe Thr Ala Val Tyr Asp Ala Gly Val  
 2965 2970 2975

Pro Gly His Leu Cys Asp Gly Gln Trp His Lys Val Thr Ala Asn Lys  
 2980 2985 2990

Ile Lys His Arg Ile Glu Leu Thr Val Asp Gly Asn Gln Val Glu Ala  
 2995 3000 3005

Gln Ser Pro Asn Pro Ala Ser Thr Ser Ala Asp Thr Asn Asp Pro Val  
 3010 3015 3020

Phe Val Gly Gly Phe Pro Asp Asp Leu Lys Gln Phe Gly Leu Thr Thr  
 3025 3030 3035 3040

Ser Ile Pro Phe Arg Gly Cys Ile Arg Ser Leu Lys Leu Thr Lys Gly  
 3045 3050 3055

Thr Ala Ser His Trp Arg Leu Ile Leu Pro Arg Pro Trp Asn  
 3060 3065 3070

<210> 8  
 <211> 730  
 <212> PRT  
 <213> Homo sapiens

<400> 8  
 Met Ala Gly Leu Thr Ala Ala Ala Pro Arg Pro Gly Val Leu Leu Leu  
 1 5 10 15

Leu Leu Ser Ile Leu His Pro Ser Arg Pro Gly Gly Val Pro Gly Ala  
 20 25 30

Ile Pro Gly Gly Val Pro Gly Gly Val Phe Tyr Pro Gly Ala Gly Leu  
 35 40 45

Gly Ala Leu Gly Gly Ala Leu Gly Pro Gly Gly Lys Pro Leu Lys  
 50 55 60

Pro Val Pro Gly Gly Leu Ala Gly Ala Gly Leu Gly Ala Gly Leu Gly  
 65 70 75 80

Ala Phe Pro Ala Val Thr Phe Pro Gly Ala Leu Val Pro Gly Gly Val  
 85 90 95

Ala Asp Ala Ala Ala Ala Tyr Lys Ala Ala Lys Ala Gly Ala Gly Leu  
 100 105 110

Gly Gly Val Pro Gly Val Gly Gly Leu Gly Val Ser Ala Gly Ala Val  
 115 120 125

Val Pro Gln Pro Gly Ala Gly Val Lys Pro Gly Lys Val Pro Gly Val  
 130 135 140

Gly Leu Pro Gly Val Tyr Pro Gly Gly Val Leu Pro Gly Ala Arg Phe  
 145 150 155 160

Pro Gly Val Gly Val Leu Pro Gly Val Pro Thr Gly Ala Gly Val Lys  
 165 170 175

Pro Lys Ala Pro Gly Val Gly Gly Ala Phe Ala Gly Ile Pro Gly Val  
 180 185 190

Gly Pro Phe Gly Gly Pro Gln Pro Gly Val Pro Leu Gly Tyr Pro Ile  
 195 200 205

Lys Ala Pro Lys Leu Pro Gly Gly Tyr Gly Leu Pro Tyr Thr Thr Gly  
 210 215 220

Lys Leu Pro Tyr Gly Tyr Gly Pro Gly Gly Val Ala Gly Ala Ala Gly  
 225 230 235 240

Lys Ala Gly Tyr Pro Thr Gly Thr Gly Val Gly Pro Gln Ala Ala Ala  
 245 250 255

Ala Ala Ala Ala Lys Ala Ala Ala Lys Phe Gly Ala Gly Ala Ala Gly  
 260 265 270

Val Leu Pro Gly Val Gly Gly Ala Gly Val Pro Gly Val Pro Gly Ala  
 275 280 285

Ile Pro Gly Ile Gly Gly Ile Ala Gly Val Gly Thr Pro Ala Ala Ala  
 290 295 300

Ala Ala Ala Ala Ala Ala Lys Ala Ala Lys Tyr Gly Ala Ala Ala  
 305 310 315 320

Gly Leu Val Pro Gly Gly Pro Gly Phe Gly Pro Gly Val Val Gly Val  
 325 330 335

Pro Gly Ala Gly Val Pro Gly Val Gly Val Pro Gly Ala Gly Ile Pro  
340 345 350

Val Val Pro Gly Ala Gly Ile Pro Gly Ala Ala Val Pro Gly Val Val  
355 360 365

Ser Pro Glu Ala Ala Ala Lys Ala Ala Ala Lys Ala Ala Lys Tyr Gly  
370 375 380

Ala Arg Pro Gly Val Gly Val Gly Gly Ile Pro Thr Tyr Gly Val Gly  
385 390 395 400

Ala Gly Gly Phe Pro Gly Phe Gly Val Gly Val Gly Gly Ile Pro Gly  
405 410 415

Val Ala Gly Val Pro Ser Val Gly Gly Val Pro Gly Val Gly Gly Val  
420 425 430

Pro Gly Val Gly Ile Ser Pro Glu Ala Gln Ala Ala Ala Ala Lys  
435 440 445

Ala Ala Lys Tyr Gly Val Gly Thr Pro Ala Ala Ala Ala Lys Ala  
450 455 460

Ala Ala Lys Ala Ala Gln Phe Ala Leu Leu Asn Leu Ala Gly Leu Val  
465 470 475 480

Pro Gly Val Gly Val Ala Pro Gly Val Gly Val Ala Pro Gly Val Gly  
485 490 495

Val Ala Pro Gly Val Gly Leu Ala Pro Gly Val Gly Val Ala Pro Gly  
500 505 510

Val Gly Val Ala Pro Gly Val Gly Val Ala Pro Gly Ile Gly Pro Gly  
515 520 525

Gly Val Ala Ala Ala Lys Ser Ala Ala Lys Val Ala Ala Lys Ala  
530 535 540

Gln Leu Arg Ala Ala Ala Gly Leu Gly Ala Gly Ile Pro Gly Leu Gly  
545 550 555 560

Val Gly Val Gly Val Pro Gly Leu Gly Val Gly Ala Gly Val Pro Gly  
565 570 575

Leu Gly Val Gly Ala Gly Val Pro Gly Phe Gly Ala Val Pro Gly Ala  
580 585 590

Leu Ala Ala Ala Lys Ala Ala Lys Tyr Gly Ala Ala Val Pro Gly Val  
595 600 605

Leu Gly Gly Leu Gly Ala Leu Gly Gly Val Gly Ile Pro Gly Gly Val  
610 615 620

Val Gly Ala Gly Pro Ala Ala Ala Ala Ala Lys Ala Ala Ala  
625 630 635 640

Lys Ala Ala Gln Phe Gly Leu Val Gly Ala Ala Gly Leu Gly Gly Leu  
 645 650 655

Gly Val Gly Gly Leu Gly Val Pro Gly Val Gly Gly Leu Gly Gly Ile  
 660 665 670

Pro Pro Ala Ala Ala Ala Lys Ala Ala Lys Tyr Gly Ala Ala Gly Leu  
 675 680 685

Gly Gly Val Leu Gly Gly Ala Gly Gln Phe Pro Leu Gly Gly Val Ala  
 690 695 700

Ala Arg Pro Gly Phe Gly Leu Ser Pro Ile Phe Pro Gly Gly Ala Cys  
 705 710 715 720

Leu Gly Lys Ala Cys Gly Arg Lys Arg Lys  
 725 730

<210> 9

<211> 1712

<212> PRT

<213> Homo sapiens

<400> 9

Met Gly Arg Asp Gln Arg Ala Val Ala Gly Pro Ala Leu Arg Arg Trp  
 1 5 10 15

Leu Leu Leu Gly Thr Val Thr Val Gly Phe Leu Ala Gln Ser Val Leu  
 20 25 30

Ala Gly Val Lys Lys Phe Asp Val Pro Cys Gly Gly Arg Asp Cys Ser  
 35 40 45

Gly Gly Cys Gln Cys Tyr Pro Glu Lys Gly Gly Arg Gly Gln Pro Gly  
 50 55 60

Pro Val Gly Pro Gln Gly Tyr Asn Gly Pro Pro Gly Leu Gln Gly Phe  
 65 70 75 80

Pro Gly Leu Gln Gly Arg Lys Gly Asp Lys Gly Glu Arg Gly Ala Pro  
 85 90 95

Gly Val Thr Gly Pro Lys Gly Asp Val Gly Ala Arg Gly Val Ser Gly  
 100 105 110

Phe Pro Gly Ala Asp Gly Ile Pro Gly His Pro Gly Gln Gly Gly Pro  
 115 120 125

Arg Gly Arg Pro Gly Tyr Asp Gly Cys Asn Gly Thr Gln Gly Asp Ser  
 130 135 140

Gly Pro Gln Gly Pro Pro Gly Ser Glu Gly Phe Thr Gly Pro Pro Gly  
 145 150 155 160

Pro Gln Gly Pro Lys Gly Gln Lys Gly Glu Pro Tyr Ala Leu Pro Lys  
 165 170 175

Glu Glu Arg Asp Arg Tyr Arg Gly Glu Pro Gly Glu Pro Gly Leu Val  
 180 185 190  
 Gly Phe Gln Gly Pro Pro Gly Arg Pro Gly His Val Gly Gln Met Gly  
 195 200 205  
 Pro Val Gly Ala Pro Gly Arg Pro Gly Pro Pro Gly Pro Pro Gly Pro  
 210 215 220  
 Lys Gly Gln Gln Gly Asn Arg Gly Leu Gly Phe Tyr Gly Val Lys Gly  
 225 230 235 240  
 Glu Lys Gly Asp Val Gly Gln Pro Gly Pro Asn Gly Ile Pro Ser Asp  
 245 250 255  
 Thr Leu His Pro Ile Ile Ala Pro Thr Gly Val Thr Phe His Pro Asp  
 260 265 270  
 Gln Tyr Lys Gly Glu Lys Gly Ser Glu Gly Glu Pro Gly Ile Arg Gly  
 275 280 285  
 Ile Ser Leu Lys Gly Glu Glu Gly Ile Met Gly Phe Pro Gly Leu Arg  
 290 295 300  
 Gly Tyr Pro Gly Leu Ser Gly Glu Lys Gly Ser Pro Gly Gln Lys Gly  
 305 310 315 320  
 Ser Arg Gly Leu Asp Gly Tyr Gln Gly Pro Asp Gly Pro Arg Gly Pro  
 325 330 335  
 Lys Gly Glu Ala Gly Asp Pro Gly Pro Pro Gly Leu Pro Ala Tyr Ser  
 340 345 350  
 Pro His Pro Ser Leu Ala Lys Gly Ala Arg Gly Asp Pro Gly Phe Pro  
 355 360 365  
 Gly Ala Gln Gly Glu Pro Gly Ser Gln Gly Glu Pro Gly Asp Pro Gly  
 370 375 380  
 Leu Pro Gly Pro Pro Gly Leu Ser Ile Gly Asp Gly Asp Gln Arg Arg  
 385 390 395 400  
 Gly Leu Pro Gly Glu Met Gly Pro Lys Gly Phe Ile Gly Asp Pro Gly  
 405 410 415  
 Ile Pro Ala Leu Tyr Gly Gly Pro Pro Gly Pro Asp Gly Lys Arg Gly  
 420 425 430  
 Pro Pro Gly Pro Pro Gly Leu Pro Gly Pro Pro Gly Pro Asp Gly Phe  
 435 440 445  
 Leu Phe Gly Leu Lys Gly Ala Lys Gly Arg Ala Gly Phe Pro Gly Leu  
 450 455 460  
 Pro Gly Ser Pro Gly Ala Arg Gly Pro Lys Gly Trp Lys Gly Asp Ala  
 465 470 475 480

Gly Glu Cys Arg Cys Thr Glu Gly Asp Glu Ala Ile Lys Gly Leu Pro  
 485 490 495

Gly Leu Pro Gly Pro Lys Gly Phe Ala Gly Ile Asn Gly Glu Pro Gly  
 500 505 510

Arg Lys Gly Asp Lys Gly Asp Pro Gly Gln His Gly Leu Pro Gly Phe  
 515 520 525

Pro Gly Leu Lys Gly Val Pro Gly Asn Ile Gly Ala Pro Gly Pro Lys  
 530 535 540

Gly Ala Lys Gly Asp Ser Arg Thr Ile Thr Thr Lys Gly Glu Arg Gly  
 545 550 555 560

Gln Pro Gly Val Pro Gly Val Pro Gly Met Lys Gly Asp Asp Gly Ser  
 565 570 575

Pro Gly Arg Asp Gly Leu Asp Gly Phe Pro Gly Leu Pro Gly Pro Pro  
 580 585 590

Gly Asp Gly Ile Lys Gly Pro Pro Gly Asp Pro Gly Tyr Pro Gly Ile  
 595 600 605

Pro Gly Thr Lys Gly Thr Pro Gly Glu Met Gly Pro Pro Gly Leu Gly  
 610 615 620

Leu Pro Gly Leu Lys Gly Gln Arg Gly Phe Pro Gly Asp Ala Gly Leu  
 625 630 635 640

Pro Gly Pro Pro Gly Phe Leu Gly Pro Pro Gly Pro Ala Gly Thr Pro  
 645 650 655

Gly Gln Ile Asp Cys Asp Thr Asp Val Lys Arg Ala Val Gly Gly Asp  
 660 665 670

Arg Gln Glu Ala Ile Gln Pro Gly Cys Ile Ala Gly Pro Lys Gly Leu  
 675 680 685

Pro Gly Leu Pro Gly Pro Pro Gly Pro Thr Gly Ala Lys Gly Leu Arg  
 690 695 700

Gly Ile Pro Gly Phe Ala Gly Ala Asp Gly Gly Pro Gly Pro Arg Gly  
 705 710 715 720

Leu Pro Gly Asp Ala Gly Arg Glu Gly Phe Pro Gly Pro Pro Gly Phe  
 725 730 735

Ile Gly Pro Arg Gly Ser Lys Gly Ala Val Gly Leu Pro Gly Pro Asp  
 740 745 750

Gly Ser Pro Gly Pro Ile Gly Leu Pro Gly Pro Asp Gly Pro Pro Gly  
 755 760 765

Glu Arg Gly Leu Pro Gly Glu Val Leu Gly Ala Gln Pro Gly Pro Arg  
 770 775 780

Gly Asp Ala Gly Val Pro Gly Gln Pro Gly Leu Lys Gly Leu Pro Gly  
 785 790 795 800

Asp Arg Gly Pro Pro Gly Phe Arg Gly Ser Gln Gly Met Pro Gly Met  
 805 810 815

Pro Gly Leu Lys Gly Gln Pro Gly Leu Pro Gly Pro Ser Gly Gln Pro  
 820 825 830

Gly Leu Tyr Gly Pro Pro Gly Leu His Gly Phe Pro Gly Ala Pro Gly  
 835 840 845

Gln Glu Gly Pro Leu Gly Leu Pro Gly Ile Pro Gly Arg Glu Gly Leu  
 850 855 860

Pro Gly Asp Arg Gly Asp Pro Gly Asp Thr Gly Ala Pro Gly Pro Val  
 865 870 875 880

Gly Met Lys Gly Leu Ser Gly Asp Arg Gly Asp Ala Gly Phe Thr Gly  
 885 890 895

Glu Gln Gly His Pro Gly Ser Pro Gly Phe Lys Gly Ile Asp Gly Met  
 900 905 910

Pro Gly Thr Pro Gly Leu Lys Gly Asp Arg Gly Ser Pro Gly Met Asp  
 915 920 925

Gly Phe Gln Gly Met Pro Gly Leu Lys Gly Arg Pro Gly Phe Pro Gly  
 930 935 940

Ser Lys Gly Glu Ala Gly Phe Phe Gly Ile Pro Gly Leu Lys Gly Leu  
 945 950 955 960

Ala Gly Glu Pro Gly Phe Lys Gly Ser Arg Gly Asp Pro Gly Pro Pro  
 965 970 975

Gly Pro Pro Pro Val Ile Leu Pro Gly Met Lys Asp Ile Lys Gly Glu  
 980 985 990

Lys Gly Asp Glu Gly Pro Met Gly Leu Lys Gly Tyr Leu Gly Ala Lys  
 995 1000 1005

Gly Ile Gln Gly Met Pro Gly Ile Pro Gly Leu Ser Gly Ile Pro Gly  
 1010 1015 1020

Leu Pro Gly Arg Pro Gly His Ile Lys Gly Val Lys Gly Asp Ile Gly  
 1025 1030 1035 1040

Val Pro Gly Ile Pro Gly Leu Pro Gly Phe Pro Gly Val Ala Gly Pro  
 1045 1050 1055

Pro Gly Ile Thr Gly Phe Pro Gly Phe Ile Gly Ser Arg Gly Asp Lys  
 1060 1065 1070

Gly Ala Pro Gly Arg Ala Gly Leu Tyr Gly Glu Ile Gly Ala Thr Gly  
 1075 1080 1085

Asp Phe Gly Asp Ile Gly Asp Thr Ile Asn Leu Pro Gly Arg Pro Gly  
1090 1095 1100

Leu Lys Gly Glu Arg Gly Thr Thr Gly Ile Pro Gly Leu Lys Gly Phe  
1105 1110 1115 1120

Phe Gly Glu Lys Gly Thr Glu Gly Asp Ile Gly Phe Pro Gly Ile Thr  
1125 1130 1135

Gly Val Thr Gly Val Gln Gly Pro Pro Gly Leu Lys Gly Gln Thr Gly  
1140 1145 1150

Phe Pro Gly Leu Thr Gly Pro Pro Gly Ser Gln Gly Glu Leu Gly Arg  
1155 1160 1165

Ile Gly Leu Pro Gly Gly Lys Gly Asp Asp Gly Trp Pro Gly Ala Pro  
1170 1175 1180

Gly Leu Pro Gly Phe Pro Gly Leu Arg Gly Ile Arg Gly Leu His Gly  
1185 1190 1195 1200

Leu Pro Gly Thr Lys Gly Phe Pro Gly Ser Pro Gly Ser Asp Ile His  
1205 1210 1215

Gly Asp Pro Gly Phe Pro Gly Pro Pro Gly Glu Arg Gly Asp Pro Gly  
1220 1225 1230

Glu Ala Asn Thr Leu Pro Gly Pro Val Gly Val Pro Gly Gln Lys Gly  
1235 1240 1245

Asp Gln Gly Ala Pro Gly Glu Arg Gly Pro Pro Gly Ser Pro Gly Leu  
1250 1255 1260

Gln Gly Phe Pro Gly Ile Thr Pro Pro Ser Asn Ile Ser Gly Ala Pro  
1265 1270 1275 1280

Gly Asp Lys Gly Ala Pro Gly Ile Phe Gly Leu Lys Gly Tyr Arg Gly  
1285 1290 1295

Pro Pro Gly Pro Pro Gly Ser Ala Ala Leu Pro Gly Ser Lys Gly Asp  
1300 1305 1310

Thr Gly Asn Pro Gly Ala Pro Gly Thr Pro Gly Thr Lys Gly Trp Ala  
1315 1320 1325

Gly Asp Ser Gly Pro Gln Gly Arg Pro Gly Val Phe Gly Leu Pro Gly  
1330 1335 1340

Glu Lys Gly Pro Arg Gly Glu Gln Gly Phe Met Gly Asn Thr Gly Pro  
1345 1350 1355 1360

Thr Gly Ala Val Gly Asp Arg Gly Pro Lys Gly Pro Lys Gly Asp Pro  
1365 1370 1375

Gly Phe Pro Gly Ala Pro Gly Thr Val Gly Ala Pro Gly Ile Ala Gly  
1380 1385 1390

Ile Pro Gln Lys Ile Ala Ile Gln Pro Gly Thr Val Gly Pro Gln Gly  
 1395 1400 1405  
 Arg Arg Gly Pro Pro Gly Ala Pro Gly Glu Ile Gly Pro Gln Gly Pro  
 1410 1415 1420  
 Pro Gly Glu Pro Gly Phe Arg Gly Ala Pro Gly Lys Ala Gly Pro Gln  
 1425 1430 1435 1440  
 Gly Arg Gly Gly Val Ser Ala Val Pro Gly Phe Arg Gly Asp Glu Gly  
 1445 1450 1455  
 Pro Ile Gly His Gln Gly Pro Ile Gly Gln Glu Gly Ala Pro Gly Arg  
 1460 1465 1470  
 Pro Gly Ser Pro Gly Leu Pro Gly Met Pro Gly Arg Ser Val Ser Ile  
 1475 1480 1485  
 Gly Tyr Leu Leu Val Lys His Ser Gln Thr Asp Gln Glu Pro Met Cys  
 1490 1495 1500  
 Pro Val Gly Met Asn Lys Leu Trp Ser Gly Tyr Ser Leu Leu Tyr Phe  
 1505 1510 1515 1520  
 Glu Gly Gln Glu Lys Ala His Asn Gln Asp Leu Gly Leu Ala Gly Ser  
 1525 1530 1535  
 Cys Leu Ala Arg Phe Ser Thr Met Pro Phe Leu Tyr Cys Asn Pro Gly  
 1540 1545 1550  
 Asp Val Cys Tyr Tyr Ala Ser Arg Asn Asp Lys Ser Tyr Trp Leu Ser  
 1555 1560 1565  
 Thr Thr Ala Pro Leu Pro Met Met Pro Val Ala Glu Asp Glu Ile Lys  
 1570 1575 1580  
 Pro Tyr Ile Ser Arg Cys Ser Val Cys Glu Ala Pro Ala Ile Ala Ile  
 1585 1590 1595 1600  
 Ala Val His Ser Gln Asp Val Ser Ile Pro His Cys Pro Ala Gly Trp  
 1605 1610 1615  
 Arg Ser Leu Trp Ile Gly Tyr Ser Phe Leu Met His Thr Ala Ala Gly  
 1620 1625 1630  
 Asp Glu Gly Gly Gln Ser Leu Val Ser Pro Gly Ser Cys Leu Glu  
 1635 1640 1645  
 Asp Phe Arg Ala Thr Pro Phe Ile Glu Cys Asn Gly Gly Arg Gly Thr  
 1650 1655 1660  
 Cys His Tyr Tyr Ala Asn Lys Tyr Ser Phe Trp Leu Thr Thr Ile Pro  
 1665 1670 1675 1680  
 Glu Gln Ser Phe Gln Gly Ser Pro Ser Ala Asp Thr Leu Lys Ala Gly  
 1685 1690 1695

Leu Ile Arg Thr His Ile Ser Arg Cys Gln Val Cys Met Lys Asn Leu  
 1700 1705 1710

<210> 10  
 <211> 122  
 <212> PRT  
 <213> Homo sapiens

<400> 10  
 Met Glu Ala Ser Ala Leu Thr Ser Ser Ala Val Thr Ser Val Ala Lys  
 1 5 10 15

Val Val Arg Val Ala Ser Gly Ser Ala Val Val Leu Pro Leu Ala Arg  
 20 25 30

Ile Ala Thr Val Val Ile Gly Gly Val Val Ala Met Ala Ala Val Pro  
 35 40 45

Met Val Leu Ser Ala Met Gly Phe Thr Ala Ala Gly Ile Ala Ser Ser  
 50 55 60

Ser Ile Ala Ala Lys Met Met Ser Ala Ala Ala Ile Ala Asn Gly Gly  
 65 70 75 80

Gly Val Ala Ser Gly Ser Leu Val Gly Thr Leu Gln Ser Leu Gly Ala  
 85 90 95

Thr Gly Leu Ser Gly Leu Thr Lys Phe Ile Leu Gly Ser Ile Gly Ser  
 100 105 110

Ala Ile Ala Ala Val Ile Ala Arg Phe Tyr  
 115 120

<210> 11  
 <211> 331  
 <212> PRT  
 <213> Homo sapiens

<400> 11  
 Met Ala Arg Gly Gly Arg Gly Arg Arg Leu Gly Leu Ala Leu Gly Leu  
 1 5 10 15

Leu Leu Ala Leu Val Leu Ala Pro Arg Val Leu Arg Ala Lys Pro Thr  
 20 25 30

Val Arg Lys Glu Arg Val Val Arg Pro Asp Ser Glu Leu Gly Glu Arg  
 35 40 45

Pro Pro Glu Asp Asn Gln Ser Phe Gln Tyr Asp His Glu Ala Phe Leu  
 50 55 60

Gly Lys Glu Asp Ser Lys Thr Phe Asp Gln Leu Thr Pro Asp Glu Ser  
 65 70 75 80

Lys Glu Arg Leu Gly Lys Ile Val Asp Arg Ile Asp Asn Asp Gly Asp  
 85 90 95

Gly Phe Val Thr Thr Glu Glu Leu Lys Thr Trp Ile Lys Arg Val Gln  
 100 105 110  
 Lys Arg Tyr Ile Phe Asp Asn Val Ala Lys Val Trp Lys Asp Tyr Asp  
 115 120 125  
 Arg Asp Lys Asp Asp Lys Ile Ser Trp Glu Glu Tyr Lys Gln Ala Thr  
 130 135 140  
 Tyr Gly Tyr Tyr Leu Gly Asn Pro Ala Glu Phe His Asp Ser Ser Asp  
 145 150 155 160  
 His His Thr Phe Lys Lys Met Leu Pro Arg Asp Glu Arg Arg Phe Lys  
 165 170 175  
 Ala Ala Asp Leu Asn Gly Asp Leu Thr Ala Thr Arg Glu Glu Phe Thr  
 180 185 190  
 Ala Phe Leu His Pro Glu Glu Phe Glu His Met Lys Glu Ile Val Val  
 195 200 205  
 Leu Glu Thr Leu Glu Asp Ile Asp Lys Asn Gly Asp Gly Phe Val Asp  
 210 215 220  
 Gln Asp Glu Tyr Ile Ala Asp Met Phe Ser His Glu Glu Asn Gly Pro  
 225 230 235 240  
 Glu Pro Asp Trp Val Leu Ser Glu Arg Glu Gln Phe Asn Glu Phe Arg  
 245 250 255  
 Asp Leu Asn Lys Asp Gly Lys Leu Asp Lys Asp Glu Ile Arg His Trp  
 260 265 270  
 Ile Leu Pro Gln Asp Tyr Asp His Ala Gln Ala Glu Ala Arg His Leu  
 275 280 285  
 Val Tyr Glu Ser Asp Lys Asn Lys Asp Glu Lys Leu Thr Lys Glu Glu  
 290 295 300  
 Ile Leu Glu Asn Trp Asn Met Phe Val Gly Ser Gln Ala Thr Asn Tyr  
 305 310 315 320  
 Gly Glu Asp Leu Thr Lys Asn His Asp Glu Leu  
 325 330

<210> 12  
 <211> 512  
 <212> PRT  
 <213> Homo sapiens

<400> 12  
 Met Ala Thr Ala Asn Gly Ala Val Glu Asn Gly Gln Pro Asp Gly Lys  
 1 5 10 15  
 Pro Pro Ala Leu Pro Arg Pro Ile Arg Asn Leu Glu Val Lys Phe Thr  
 20 25 30

Lys Ile Phe Ile Asn Asn Glu Trp His Glu Ser Lys Ser Gly Lys Lys  
 35 40 45

Phe Ala Thr Cys Asn Pro Ser Thr Arg Glu Gln Ile Cys Glu Val Glu  
 50 55 60

Glu Gly Asp Lys Pro Asp Val Asp Lys Ala Val Glu Ala Ala Gln Val  
 65 70 75 80

Ala Phe Gln Arg Gly Ser Pro Trp Arg Arg Leu Asp Ala Leu Ser Arg  
 85 90 95

Gly Arg Leu Leu His Gln Leu Ala Asp Leu Val Glu Arg Asp Arg Ala  
 100 105 110

Thr Leu Ala Ala Leu Glu Thr Met Asp Thr Gly Lys Pro Phe Leu His  
 115 120 125

Ala Phe Phe Ile Asp Leu Glu Gly Cys Ile Arg Thr Leu Arg Tyr Phe  
 130 135 140

Ala Gly Trp Ala Asp Lys Ile Gln Gly Lys Thr Ile Pro Thr Asp Asp  
 145 150 155 160

Asn Val Val Cys Phe Thr Arg His Glu Pro Ile Gly Val Cys Gly Ala  
 165 170 175

Ile Thr Pro Trp Asn Phe Pro Leu Leu Met Leu Val Trp Lys Leu Ala  
 180 185 190

Pro Ala Leu Cys Cys Gly Asn Thr Met Val Leu Lys Pro Ala Glu Gln  
 195 200 205

Thr Pro Leu Thr Ala Leu Tyr Leu Gly Ser Leu Ile Lys Glu Ala Gly  
 210 215 220

Phe Pro Pro Gly Val Val Asn Ile Val Pro Gly Phe Gly Pro Thr Val  
 225 230 235 240

Gly Ala Ala Ile Ser Ser His Pro Gln Ile Asn Lys Ile Ala Phe Thr  
 245 250 255

Gly Ser Thr Glu Val Gly Lys Leu Val Lys Glu Ala Ala Ser Arg Ser  
 260 265 270

Asn Leu Lys Arg Val Thr Leu Glu Leu Gly Gly Lys Asn Pro Cys Ile  
 275 280 285

Val Cys Ala Asp Ala Asp Leu Asp Leu Ala Val Glu Cys Ala His Gln  
 290 295 300

Gly Val Phe Phe Asn Gln Gly Gln Cys Cys Thr Ala Ala Ser Arg Val  
 305 310 315 320

Phe Val Glu Glu Gln Val Tyr Ser Glu Phe Val Arg Arg Ser Val Glu  
 325 330 335

Tyr Ala Lys Lys Arg Pro Val Gly Asp Pro Phe Asp Val Lys Thr Glu  
 340 345 350

Gln Gly Pro Gln Ile Asp Gln Lys Gln Phe Asp Lys Ile Leu Glu Leu  
 355 360 365

Ile Glu Ser Gly Lys Lys Glu Gly Ala Lys Leu Glu Cys Gly Ser  
 370 375 380

Ala Met Glu Asp Lys Gly Leu Phe Ile Lys Pro Thr Val Phe Ser Glu  
 385 390 395 400

Val Thr Asp Asn Met Arg Ile Ala Lys Glu Glu Ile Phe Gly Pro Val  
 405 410 415

Gln Pro Ile Leu Lys Phe Lys Ser Ile Glu Glu Val Ile Lys Arg Ala  
 420 425 430

Asn Ser Thr Asp Tyr Gly Leu Thr Ala Ala Val Phe Thr Lys Asn Leu  
 435 440 445

Asp Lys Ala Leu Lys Leu Ala Ser Ala Leu Glu Ser Gly Thr Val Trp  
 450 455 460

Ile Asn Cys Tyr Asn Ala Leu Tyr Ala Gln Ala Pro Phe Gly Gly Phe  
 465 470 475 480

Lys Met Ser Gly Asn Gly Arg Glu Leu Gly Glu Tyr Ala Leu Ala Glu  
 485 490 495

Tyr Thr Glu Val Lys Thr Val Thr Ile Lys Leu Gly Asp Lys Asn Pro  
 500 505 510

<210> 13

<211> 1781

<212> PRT

<213> Homo sapiens

<400> 13

Met Gly Ala Gly Ser Ser Thr Glu Gln Arg Ser Pro Glu Gln Pro Pro  
 1 5 10 15

Glu Gly Ser Ser Thr Pro Ala Glu Pro Glu Pro Ser Gly Gly Pro  
 20 25 30

Ser Ala Glu Ala Ala Pro Asp Thr Thr Ala Asp Pro Ala Ile Ala Ala  
 35 40 45

Ser Asp Pro Ala Thr Lys Leu Leu Gln Lys Asn Gly Gln Leu Ser Thr  
 50 55 60

Ile Asn Gly Val Ala Glu Gln Asp Glu Leu Ser Leu Gln Glu Gly Asp  
 65 70 75 80

Leu Asn Gly Gln Lys Gly Ala Leu Asn Gly Gln Gly Ala Leu Asn Ser  
 85 90 95

Gln Glu Glu Glu Glu Val Ile Val Thr Glu Val Gly Gln Arg Asp Ser  
 100 105 110

Glu Asp Val Ser Glu Arg Asp Ser Asp Lys Glu Met Ala Thr Lys Ser  
 115 120 125

Ala Val Val His Asp Ile Thr Asp Asp Gly Gln Glu Glu Asn Arg Asn  
 130 135 140

Ile Glu Gln Ile Pro Ser Ser Glu Ser Asn Leu Glu Glu Leu Thr Gln  
 145 150 155 160

Pro Thr Glu Ser Gln Ala Asn Asp Ile Gly Phe Lys Lys Val Phe Lys  
 165 170 175

Phe Val Gly Phe Lys Phe Thr Val Lys Lys Asp Lys Thr Glu Lys Pro  
 180 185 190

Asp Thr Val Gln Leu Leu Thr Val Lys Lys Asp Glu Gly Glu Gly Ala  
 195 200 205

Ala Gly Ala Gly Asp His Gln Asp Pro Ser Leu Gly Ala Gly Glu Ala  
 210 215 220

Ala Ser Lys Glu Ser Glu Pro Lys Gln Ser Thr Glu Lys Pro Glu Glu  
 225 230 235 240

Thr Leu Lys Arg Glu Gln Ser His Ala Glu Ile Ser Pro Pro Ala Glu  
 245 250 255

Ser Gly Gln Ala Val Glu Glu Cys Lys Glu Glu Gly Glu Glu Lys Gln  
 260 265 270

Glu Lys Glu Pro Ser Lys Ser Ala Glu Ser Pro Thr Ser Pro Val Thr  
 275 280 285

Ser Glu Thr Gly Ser Thr Phe Lys Lys Phe Phe Thr Gln Gly Trp Ala  
 290 295 300

Gly Trp Arg Lys Lys Thr Ser Phe Arg Lys Pro Lys Glu Asp Glu Val  
 305 310 315 320

Glu Ala Ser Glu Lys Lys Glu Gln Glu Pro Glu Lys Val Asp Thr  
 325 330 335

Glu Glu Asp Gly Lys Ala Glu Val Ala Ser Glu Lys Leu Thr Ala Ser  
 340 345 350

Glu Gln Ala His Pro Gln Glu Pro Ala Glu Ser Ala His Glu Pro Arg  
 355 360 365

Leu Ser Ala Glu Tyr Glu Lys Val Glu Leu Pro Ser Glu Glu Gln Val  
 370 375 380

Ser Gly Ser Gln Gly Pro Ser Glu Glu Lys Pro Ala Pro Leu Ala Thr  
 385 390 395 400

Glu Val Phe Asp Glu Lys Ile Glu Val His Gln Glu Glu Val Val Ala  
 405 410 415

Glu Val His Val Ser Thr Val Glu Glu Arg Thr Glu Glu Gln Lys Thr  
 420 425 430

Glu Val Glu Glu Thr Ala Gly Ser Val Pro Ala Glu Glu Leu Val Gly  
 435 440 445

Met Asp Ala Glu Pro Gln Glu Ala Glu Pro Ala Lys Glu Leu Val Lys  
 450 455 460

Leu Lys Glu Thr Cys Val Ser Gly Glu Asp Pro Thr Gln Gly Ala Asp  
 465 470 475 480

Leu Ser Pro Asp Glu Lys Val Leu Ser Lys Pro Pro Glu Gly Val Val  
 485 490 495

Ser Glu Val Glu Met Leu Ser Ser Gln Glu Arg Met Lys Val Gln Gly  
 500 505 510

Ser Pro Leu Lys Lys Leu Phe Thr Ser Thr Gly Leu Lys Lys Leu Ser  
 515 520 525

Gly Lys Lys Gln Lys Gly Lys Arg Gly Gly Asp Glu Glu Ser Gly  
 530 535 540

Glu His Thr Gln Val Pro Ala Asp Ser Pro Asp Ser Gln Glu Glu Gln  
 545 550 555 560

Lys Gly Glu Ser Ser Ala Ser Ser Pro Glu Glu Pro Glu Glu Ile Thr  
 565 570 575

Cys Leu Glu Lys Gly Leu Ala Glu Val Gln Gln Asp Gly Glu Ala Glu  
 580 585 590

Glu Gly Ala Thr Ser Asp Gly Glu Lys Lys Arg Glu Gly Val Thr Pro  
 595 600 605

Trp Ala Ser Phe Lys Lys Met Val Thr Pro Lys Lys Arg Val Arg Arg  
 610 615 620

Pro Ser Glu Ser Asp Lys Glu Asp Glu Leu Asp Lys Val Lys Ser Ala  
 625 630 635 640

Thr Leu Ser Ser Thr Glu Ser Thr Ala Ser Glu Met Gln Glu Glu Met  
 645 650 655

Lys Gly Ser Val Glu Glu Pro Lys Pro Glu Glu Pro Lys Arg Lys Val  
 660 665 670

Asp Thr Ser Val Ser Trp Glu Ala Leu Ile Cys Val Gly Ser Ser Lys  
 675 680 685

Lys Arg Ala Arg Arg Arg Ser Ser Ser Asp Glu Glu Gly Gly Pro Lys  
 690 695 700

Ala Met Gly Gly Asp His Gln Lys Ala Asp Glu Ala Gly Lys Asp Lys  
 705 710 715 720

Glu Thr Gly Thr Asp Gly Ile Leu Ala Gly Ser Gln Glu His Asp Pro  
 725 730 735

Gly Gln Gly Ser Ser Ser Pro Glu Gln Ala Gly Ser Pro Thr Glu Gly  
 740 745 750

Glu Gly Val Ser Thr Trp Glu Ser Phe Lys Arg Leu Val Thr Pro Arg  
 755 760 765

Lys Lys Ser Lys Ser Lys Leu Glu Glu Lys Ser Glu Asp Ser Ile Ala  
 770 775 780

Gly Ser Gly Val Glu His Ser Thr Pro Asp Thr Glu Pro Gly Lys Glu  
 785 790 795 800

Glu Ser Trp Val Ser Ile Lys Lys Phe Ile Pro Gly Arg Arg Lys Lys  
 805 810 815

Arg Pro Asp Gly Lys Gln Glu Gln Ala Pro Val Glu Asp Ala Gly Pro  
 820 825 830

Thr Gly Ala Asn Glu Asp Asp Ser Asp Val Pro Ala Val Val Pro Leu  
 835 840 845

Ser Glu Tyr Asp Ala Val Glu Arg Glu Lys Met Glu Ala Gln Gln Ala  
 850 855 860

Gln Lys Gly Ala Glu Gln Pro Glu Gln Lys Ala Ala Thr Glu Val Ser  
 865 870 875 880

Lys Glu Leu Ser Glu Ser Gln Val His Met Met Ala Ala Ala Val Ala  
 885 890 895

Asp Gly Thr Arg Ala Ala Thr Ile Ile Glu Glu Arg Ser Pro Ser Trp  
 900 905 910

Ile Ser Ala Ser Val Thr Glu Pro Leu Glu Gln Val Glu Ala Glu Ala  
 915 920 925

Ala Leu Leu Thr Glu Glu Val Leu Glu Arg Glu Val Ile Ala Glu Glu  
 930 935 940

Glu Pro Pro Thr Val Thr Glu Pro Leu Pro Glu Asn Arg Glu Ala Arg  
 945 950 955 960

Gly Asp Thr Val Val Ser Glu Ala Glu Leu Thr Pro Glu Ala Val Thr  
 965 970 975

Ala Ala Glu Thr Ala Gly Pro Leu Gly Ser Glu Glu Gly Thr Glu Ala  
 980 985 990

Ser Ala Ala Glu Glu Thr Thr Glu Met Val Ser Ala Val Ser Gln Leu  
 995 1000 1005

Thr Asp Ser Pro Asp Thr Thr Glu Glu Ala Thr Pro Val Gln Glu Val  
 1010 1015 1020

Glu Gly Gly Val Pro Asp Ile Glu Glu Gln Glu Arg Arg Thr Gln Glu  
 1025 1030 1035 1040

Val Leu Gln Ala Val Ala Glu Lys Val Lys Glu Glu Ser Gln Leu Pro  
 1045 1050 1055

Gly Thr Gly Gly Pro Glu Asp Val Leu Gln Pro Val Gln Arg Ala Glu  
 1060 1065 1070

Ala Glu Arg Pro Glu Glu Gln Ala Glu Ala Ser Gly Leu Lys Lys Glu  
 1075 1080 1085

Thr Asp Val Val Leu Lys Val Asp Ala Gln Glu Ala Lys Thr Glu Pro  
 1090 1095 1100

Phe Thr Gln Gly Lys Val Val Gly Gln Thr Thr Pro Glu Ser Phe Glu  
 1105 1110 1115 1120

Lys Ala Pro Gln Val Thr Glu Ser Ile Glu Ser Ser Glu Leu Val Thr  
 1125 1130 1135

Thr Cys Gln Ala Glu Thr Leu Ala Gly Val Lys Ser Gln Glu Met Val  
 1140 1145 1150

Met Glu Gln Ala Ile Pro Pro Asp Ser Val Glu Thr Pro Thr Asp Ser  
 1155 1160 1165

Glu Thr Asp Gly Ser Thr Pro Val Ala Asp Phe Asp Ala Pro Gly Thr  
 1170 1175 1180

Thr Gln Lys Asp Glu Ile Val Glu Ile His Glu Glu Asn Glu Val Ala  
 1185 1190 1195 1200

Ser Gly Thr Gln Ser Gly Gly Thr Glu Ala Glu Ala Val Pro Ala Gln  
 1205 1210 1215

Lys Glu Arg Pro Pro Ala Pro Ser Ser Phe Val Phe Gln Glu Glu Thr  
 1220 1225 1230

Lys Glu Gln Ser Lys Met Glu Asp Thr Leu Glu His Thr Asp Lys Glu  
 1235 1240 1245

Val Ser Val Glu Thr Val Ser Ile Leu Ser Lys Thr Glu Gly Thr Gln  
 1250 1255 1260

Glu Ala Asp Gln Tyr Ala Asp Glu Lys Thr Lys Asp Val Pro Phe Phe  
 1265 1270 1275 1280

Glu Gly Leu Glu Gly Ser Ile Asp Thr Gly Ile Thr Val Ser Arg Glu  
 1285 1290 1295

Lys Val Thr Glu Val Ala Leu Lys Gly Glu Gly Thr Glu Glu Ala Glu  
 1300 1305 1310

Cys Lys Lys Asp Asp Ala Leu Glu Leu Gln Ser His Ala Lys Ser Pro  
 1315 1320 1325  
 Pro Ser Pro Val Glu Arg Glu Met Val Val Gln Val Glu Arg Glu Lys  
 1330 1335 1340  
 Thr Glu Ala Glu Pro Thr His Val Asn Glu Glu Lys Leu Glu His Glu  
 1345 1350 1355 1360  
 Thr Ala Val Thr Val Ser Glu Glu Val Ser Lys Gln Leu Leu Gln Thr  
 1365 1370 1375  
 Val Asn Val Pro Ile Ile Asp Gly Ala Lys Glu Val Ser Ser Leu Glu  
 1380 1385 1390  
 Gly Ser Pro Pro Pro Cys Leu Gly Gln Glu Glu Ala Val Cys Thr Lys  
 1395 1400 1405  
 Ile Gln Val Gln Ser Ser Glu Ala Ser Phe Thr Leu Thr Ala Ala Ala  
 1410 1415 1420  
 Glu Glu Glu Lys Val Leu Gly Glu Thr Ala Asn Ile Leu Glu Thr Gly  
 1425 1430 1435 1440  
 Glu Thr Leu Glu Pro Ala Gly Ala His Leu Val Leu Glu Glu Lys Ser  
 1445 1450 1455  
 Ser Glu Lys Asn Glu Asp Phe Ala Ala His Pro Gly Glu Asp Ala Val  
 1460 1465 1470  
 Pro Thr Gly Pro Asp Cys Gln Ala Lys Ser Thr Pro Val Ile Val Ser  
 1475 1480 1485  
 Ala Thr Thr Lys Lys Gly Leu Ser Ser Asp Leu Glu Gly Glu Lys Thr  
 1490 1495 1500  
 Thr Ser Leu Lys Trp Lys Ser Asp Glu Val Asp Glu Gln Val Ala Cys  
 1505 1510 1515 1520  
 Gln Glu Val Lys Val Ser Val Ala Ile Glu Asp Leu Glu Pro Glu Asn  
 1525 1530 1535  
 Gly Ile Leu Glu Leu Glu Thr Lys Ser Ser Lys Leu Val Gln Asn Ile  
 1540 1545 1550  
 Ile Gln Thr Ala Val Asp Gln Phe Val Arg Thr Glu Glu Thr Ala Thr  
 1555 1560 1565  
 Glu Met Leu Thr Ser Glu Leu Gln Thr Gln Ala His Val Ile Lys Ala  
 1570 1575 1580  
 Asp Ser Gln Asp Ala Gly Gln Glu Thr Glu Lys Glu Gly Glu Glu Pro  
 1585 1590 1595 1600  
 Gln Ala Ser Ala Gln Asp Glu Thr Pro Ile Thr Ser Ala Lys Glu Glu  
 1605 1610 1615

Ser Glu Ser Thr Ala Val Gly Gln Ala His Ser Asp Ile Ser Lys Asp  
 1620 1625 1630  
 Met Ser Glu Ala Ser Glu Lys Thr Met Thr Val Glu Val Glu Gly Ser  
 1635 1640 1645  
 Thr Val Asn Asp Gln Gln Leu Glu Val Val Leu Pro Ser Glu Glu  
 1650 1655 1660  
 Glu Gly Gly Ala Gly Thr Lys Ser Val Pro Glu Asp Asp Gly His  
 1665 1670 1675 1680  
 Ala Leu Leu Ala Glu Arg Ile Glu Lys Ser Leu Val Glu Pro Lys Glu  
 1685 1690 1695  
 Asp Glu Lys Gly Asp Asp Val Asp Asp Pro Glu Asn Gln Asn Ser Ala  
 1700 1705 1710  
 Leu Ala Asp Thr Asp Ala Ser Gly Gly Leu Thr Lys Glu Ser Pro Asp  
 1715 1720 1725  
 Thr Asn Gly Pro Lys Gln Lys Glu Lys Glu Asp Ala Gln Glu Val Glu  
 1730 1735 1740  
 Leu Gln Glu Gly Lys Val His Ser Glu Ser Asp Lys Ala Ile Thr Pro  
 1745 1750 1755 1760  
 Gln Ala Gln Glu Glu Leu Gln Lys Gln Glu Arg Glu Ser Ala Lys Ser  
 1765 1770 1775  
 Glu Leu Thr Glu Ser  
 1780

<210> 14  
 <211> 1247  
 <212> PRT  
 <213> Homo sapiens

<400> 14  
 Met Leu Ala Ser Ser Ser Arg Ile Arg Ala Ala Trp Thr Arg Ala Leu  
 1 5 10 15  
 Leu Leu Pro Leu Leu Leu Ala Gly Pro Val Gly Cys Leu Ser Arg Gln  
 20 25 30  
 Glu Leu Phe Pro Phe Gly Pro Gly Gln Gly Asp Leu Glu Leu Glu Asp  
 35 40 45  
 Gly Asp Asp Phe Val Ser Pro Ala Leu Glu Leu Ser Gly Ala Leu Arg  
 50 55 60  
 Phe Tyr Asp Arg Ser Asp Ile Asp Ala Val Tyr Val Thr Thr Asn Gly  
 65 70 75 80  
 Ile Ile Ala Thr Ser Glu Pro Pro Ala Lys Glu Ser His Pro Gly Leu  
 85 90 95

Phe Pro Pro Thr Phe Gly Ala Val Ala Pro Phe Leu Ala Asp Leu Asp  
 100 105 110

Thr Thr Asp Gly Leu Gly Lys Val Tyr Tyr Arg Glu Asp Leu Ser Pro  
 115 120 125

Ser Ile Thr Gln Arg Ala Ala Glu Cys Val His Arg Gly Phe Pro Glu  
 130 135 140

Ile Ser Phe Gln Pro Ser Ser Ala Val Val Val Thr Trp Glu Ser Val  
 145 150 155 160

Ala Pro Tyr Gln Gly Pro Ser Arg Asp Pro Asp Gln Lys Gly Lys Arg  
 165 170 175

Asn Thr Phe Gln Ala Val Leu Ala Ser Ser Asp Ser Ser Ser Tyr Ala  
 180 185 190

Ile Phe Leu Tyr Pro Glu Asp Gly Leu Gln Phe His Thr Thr Phe Ser  
 195 200 205

Lys Lys Glu Asn Asn Gln Val Pro Ala Val Val Ala Phe Ser Gln Gly  
 210 215 220

Ser Val Gly Phe Leu Trp Lys Ser Asn Gly Ala Tyr Asn Ile Phe Ala  
 225 230 235 240

Asn Asp Arg Glu Ser Ile Glu Asn Leu Ala Lys Ser Ser Asn Ser Gly  
 245 250 255

Gln Gln Gly Val Trp Val Phe Glu Ile Gly Ser Pro Ala Thr Thr Asn  
 260 265 270

Gly Val Val Pro Ala Asp Val Ile Leu Gly Thr Glu Asp Gly Ala Glu  
 275 280 285

Tyr Asp Asp Glu Asp Glu Asp Tyr Asp Leu Ala Thr Thr Arg Leu Gly  
 290 295 300

Leu Glu Asp Val Gly Thr Thr Pro Phe Ser Tyr Lys Ala Leu Arg Arg  
 305 310 315 320

Gly Gly Ala Asp Thr Tyr Ser Val Pro Ser Val Leu Ser Pro Arg Arg  
 325 330 335

Ala Ala Thr Glu Arg Pro Leu Gly Pro Pro Thr Glu Arg Thr Arg Ser  
 340 345 350

Phe Gln Leu Ala Val Glu Thr Phe His Gln Gln His Pro Gln Val Ile  
 355 360 365

Asp Val Asp Glu Val Glu Glu Thr Gly Val Val Phe Ser Tyr Asn Thr  
 370 375 380

Asp Ser Arg Gln Thr Cys Ala Asn Asn Arg His Gln Cys Ser Val His  
 385 390 395 400

Ala Glu Cys Arg Asp Tyr Ala Thr Gly Phe Cys Cys Ser Cys Val Ala  
405 410 415

Gly Tyr Thr Gly Asn Gly Arg Gln Cys Val Ala Glu Gly Ser Pro Gln  
420 425 430

Arg Val Asn Gly Lys Val Lys Gly Arg Ile Phe Val Gly Ser Ser Gln  
435 440 445

Val Pro Ile Val Phe Glu Asn Thr Asp Leu His Ser Tyr Val Val Met  
450 455 460

Asn His Gly Arg Ser Tyr Thr Ala Ile Ser Thr Ile Pro Glu Thr Val  
465 470 475 480

Gly Tyr Ser Leu Leu Pro Leu Ala Pro Val Gly Gly Ile Ile Gly Trp  
485 490 495

Met Phe Ala Val Glu Gln Asp Gly Phe Lys Asn Gly Phe Ser Ile Thr  
500 505 510

Gly Gly Glu Phe Thr Arg Gln Ala Glu Val Thr Phe Val Gly His Pro  
515 520 525

Gly Asn Leu Val Ile Lys Gln Arg Phe Ser Gly Ile Asp Glu His Gly  
530 535 540

His Leu Thr Ile Asp Thr Glu Leu Glu Gly Arg Val Pro Gln Ile Pro  
545 550 555 560

Phe Gly Ser Ser Val His Ile Glu Pro Tyr Thr Glu Leu Tyr His Tyr  
565 570 575

Ser Thr Ser Val Ile Thr Ser Ser Ser Thr Arg Glu Tyr Thr Val Thr  
580 585 590

Glu Pro Glu Arg Asp Gly Ala Ser Pro Ser Arg Ile Tyr Thr Tyr Gln  
595 600 605

Trp Arg Gln Thr Ile Thr Phe Gln Glu Cys Val His Asp Asp Ser Arg  
610 615 620

Pro Ala Leu Pro Ser Thr Gln Gln Leu Ser Val Asp Ser Val Phe Val  
625 630 635 640

Leu Tyr Asn Gln Glu Glu Lys Ile Leu Arg Tyr Ala Phe Ser Asn Ser  
645 650 655

Ile Gly Pro Val Arg Glu Gly Ser Pro Asp Ala Leu Gln Asn Pro Cys  
660 665 670

Tyr Ile Gly Thr His Gly Cys Asp Thr Asn Ala Ala Cys Arg Pro Gly  
675 680 685

Pro Arg Thr Gln Phe Thr Cys Glu Cys Ser Ile Gly Phe Arg Gly Asp  
690 695 700

Gly Arg Thr Cys Tyr Asp Ile Asp Glu Cys Ser Glu Gln Pro Ser Val  
 705 710 715 720  
 Cys Gly Ser His Thr Ile Cys Asn Asn His Pro Gly Thr Phe Arg Cys  
 725 730 735  
 Glu Cys Val Glu Gly Tyr Gln Phe Ser Asp Glu Gly Thr Cys Val Ala  
 740 745 750  
 Val Val Asp Gln Arg Pro Ile Asn Tyr Cys Glu Thr Gly Leu His Asn  
 755 760 765  
 Cys Asp Ile Pro Gln Arg Ala Gln Cys Ile Tyr Thr Gly Gly Ser Ser  
 770 775 780  
 Tyr Thr Cys Ser Cys Leu Pro Gly Phe Ser Gly Asp Gly Gln Ala Cys  
 785 790 795 800  
 Gln Asp Val Asp Glu Cys Gln Pro Ser Arg Cys His Pro Asp Ala Phe  
 805 810 815  
 Cys Tyr Asn Thr Pro Gly Ser Phe Thr Cys Gln Cys Lys Pro Gly Tyr  
 820 825 830  
 Gln Gly Asp Gly Phe Arg Cys Val Pro Gly Glu Val Glu Lys Thr Arg  
 835 840 845  
 Cys Gln His Glu Arg Glu His Ile Leu Gly Ala Ala Gly Ala Thr Asp  
 850 855 860  
 Pro Gln Arg Pro Ile Pro Pro Gly Leu Phe Val Pro Glu Cys Asp Ala  
 865 870 875 880  
 His Gly His Tyr Ala Pro Thr Gln Cys His Gly Ser Thr Gly Tyr Cys  
 885 890 895  
 Trp Cys Val Asp Arg Asp Gly Arg Glu Val Glu Gly Thr Arg Thr Arg  
 900 905 910  
 Pro Gly Met Thr Pro Pro Cys Leu Ser Thr Val Ala Pro Pro Ile His  
 915 920 925  
 Gln Gly Pro Ala Val Pro Thr Ala Val Ile Pro Leu Pro Pro Gly Thr  
 930 935 940  
 His Leu Leu Phe Ala Gln Thr Gly Lys Ile Glu Arg Leu Pro Leu Glu  
 945 950 955 960  
 Gly Asn Thr Met Arg Lys Thr Glu Ala Lys Ala Phe Leu His Val Pro  
 965 970 975  
 Ala Lys Val Ile Ile Gly Leu Ala Phe Asp Cys Val Asp Lys Met Val  
 980 985 990  
 Tyr Trp Thr Asp Ile Thr Glu Pro Ser Ile Gly Arg Ala Ser Leu His  
 995 1000 1005

Gly Gly Glu Pro Thr Thr Ile Ile Arg Gln Asp Leu Gly Ser Pro Glu  
 1010 1015 1020

Gly Ile Ala Val Asp His Leu Gly Arg Asn Ile Phe Trp Thr Asp Ser  
 1025 1030 1035 1040

Asn Leu Asp Arg Ile Glu Val Ala Lys Leu Asp Gly Thr Gln Arg Arg  
 1045 1050 1055

Val Leu Phe Glu Thr Asp Leu Val Asn Pro Arg Gly Ile Val Thr Asp  
 1060 1065 1070

Ser Val Arg Gly Asn Leu Tyr Trp Thr Asp Trp Asn Arg Asp Asn Pro  
 1075 1080 1085

Lys Ile Glu Thr Ser Tyr Met Asp Gly Thr Asn Arg Arg Ile Leu Val  
 1090 1095 1100

Gln Asp Asp Leu Gly Leu Pro Asn Gly Leu His Phe Asp Ala Phe Ser  
 1105 1110 1115 1120

Ser Gln Leu Cys Trp Val Asp Ala Gly Thr Asn Arg Ala Glu Cys Leu  
 1125 1130 1135

Asn Pro Ser Gln Pro Ser Arg Arg Lys Ala Leu Glu Gly Leu Gln Tyr  
 1140 1145 1150

Pro Phe Ala Val Thr Ser Tyr Gly Lys Asn Leu Tyr Phe Thr Asp Trp  
 1155 1160 1165

Lys Met Asn Ser Val Val Ala Leu Asp Leu Ala Ile Ser Lys Glu Thr  
 1170 1175 1180

Asp Ala Phe Gln Pro His Lys Gln Thr Arg Leu Tyr Gly Ile Thr Thr  
 1185 1190 1195 1200

Ala Leu Ser Gln Cys Pro Gln Gly His Asn Tyr Cys Ser Val Asn Asn  
 1205 1210 1215

Gly Gly Cys Thr His Leu Cys Leu Ala Thr Pro Gly Ser Arg Thr Cys  
 1220 1225 1230

Arg Cys Pro Asp Asn Thr Leu Gly Val Asp Cys Ile Glu Arg Lys  
 1235 1240 1245

<210> 15

<211> 997

<212> PRT

<213> Homo sapiens

<400> 15

Met Pro Ser Glu Lys Lys Ile Ser Ser Ala Asn Asp Cys Ile Ser Phe  
 1 5 10 15

Met Gln Ala Gly Cys Glu Leu Lys Lys Val Arg Pro Asn Ser Arg Ile  
 20 25 30

Tyr Asn Arg Phe Phe Thr Leu Asp Thr Asp Leu Gln Ala Leu Arg Trp  
 35 40 45

Glu Pro Ser Lys Lys Asp Leu Glu Lys Ala Lys Leu Asp Ile Ser Ala  
 50 55 60

Ile Lys Glu Ile Arg Leu Gly Lys Asn Thr Glu Thr Phe Thr Asn Asn  
 65 70 75 80

Gly Leu Ala Asp Gln Ile Cys Glu Asp Cys Ala Phe Ser Ile Leu His  
 85 90 95

Gly Glu Asn Tyr Glu Ser Leu Asp Leu Val Ala Asn Ser Ala Asp Val  
 100 105 110

Ala Asn Ile Trp Val Ser Gly Leu Arg Tyr Leu Val Ser Arg Ser Lys  
 115 120 125

Gln Pro Leu Asp Phe Met Glu Gly Asn Gln Asn Thr Pro Arg Phe Met  
 130 135 140

Trp Leu Lys Thr Val Phe Glu Ala Ala Asp Val Asp Gly Asn Gly Ile  
 145 150 155 160

Met Leu Glu Asp Thr Ser Val Glu Leu Ile Lys Gln Leu Asn Pro Thr  
 165 170 175

Leu Lys Glu Ala Lys Ile Arg Leu Lys Phe Lys Glu Ile Gln Lys Ser  
 180 185 190

Lys Glu Lys Leu Thr Thr Arg Val Thr Glu Glu Phe Cys Glu Ala  
 195 200 205

Phe Cys Glu Leu Cys Thr Arg Pro Glu Val Tyr Phe Leu Leu Val Gln  
 210 215 220

Ile Ser Lys Asn Lys Glu Tyr Leu Asp Ala Asn Asp Leu Met Leu Phe  
 225 230 235 240

Leu Glu Ala Glu Gln Gly Val Thr His Ile Thr Glu Asp Ile Cys Leu  
 245 250 255

Asp Ile Ile Arg Arg Tyr Glu Leu Ser Glu Glu Gly Arg Gln Lys Gly  
 260 265 270

Phe Leu Ala Ile Asp Gly Phe Thr Gln Tyr Leu Leu Ser Ser Glu Cys  
 275 280 285

Asp Ile Phe Asp Pro Glu Gln Lys Lys Val Ala Gln Asp Met Thr Gln  
 290 295 300

Pro Leu Ser His Tyr Tyr Ile Asn Ala Ser His Asn Thr Tyr Leu Ile  
 305 310 315 320

Glu Asp Gln Phe Arg Gly Pro Ala Asp Ile Asn Gly Tyr Ile Arg Ala  
 325 330 335

Leu Lys Met Gly Cys Arg Ser Val Glu Leu Asp Val Ser Asp Gly Ser  
 340 345 350

Asp Asn Glu Pro Ile Leu Cys Asn Arg Asn Asn Met Thr Thr His Val  
 355 360 365

Ser Phe Arg Ser Val Ile Glu Val Ile Asn Lys Phe Ala Phe Val Ala  
 370 375 380

Ser Glu Tyr Pro Leu Ile Leu Cys Leu Gly Asn His Cys Ser Leu Pro  
 385 390 395 400

Gln Gln Lys Val Met Ala Gln Gln Met Lys Lys Val Phe Gly Asn Lys  
 405 410 415

Leu Tyr Thr Glu Ala Pro Leu Pro Ser Glu Ser Tyr Leu Pro Ser Pro  
 420 425 430

Glu Lys Leu Lys Arg Met Ile Ile Val Lys Gly Lys Lys Leu Pro Ser  
 435 440 445

Asp Pro Asp Val Leu Glu Gly Glu Val Thr Asp Glu Asp Glu Glu Ala  
 450 455 460

Gln Met Ser Arg Arg Met Ser Val Asp Tyr Asn Gly Glu Gln Lys Gln  
 465 470 475 480

Ile Arg Leu Cys Arg Glu Leu Ser Asp Leu Val Ser Ile Cys Lys Ser  
 485 490 495

Val Gln Tyr Arg Asp Phe Glu Leu Ser Met Lys Ser Gln Asn Tyr Trp  
 500 505 510

Glu Met Cys Ser Phe Ser Glu Thr Glu Ala Ser Arg Ile Ala Asn Glu  
 515 520 525

Tyr Pro Glu Asp Phe Val Asn Tyr Asn Lys Lys Phe Leu Ser Arg Ile  
 530 535 540

Tyr Pro Ser Ala Met Arg Ile Asp Ser Ser Asn Leu Asn Pro Gln Asp  
 545 550 555 560

Phe Trp Asn Cys Gly Cys Gln Ile Val Ala Met Asn Phe Gln Thr Pro  
 565 570 575

Gly Pro Met Met Asp Leu His Thr Gly Trp Phe Leu Gln Asn Gly Gly  
 580 585 590

Cys Gly Tyr Val Leu Arg Pro Ser Ile Met Arg Asp Glu Val Ser Tyr  
 595 600 605

Phe Ser Ala Asn Thr Lys Gly Ile Leu Pro Gly Val Ser Pro Leu Ala  
 610 615 620

Leu His Ile Lys Ile Ile Ser Gly Gln Asn Phe Pro Lys Pro Lys Gly  
 625 630 635 640

Ala Cys Ala Lys Gly Asp Val Ile Asp Pro Tyr Val Cys Ile Glu Ile  
645 650 655

His Gly Ile Pro Ala Asp Cys Ser Glu Gln Arg Thr Lys Thr Val Gln  
660 665 670

Gln Asn Ser Asp Asn Pro Ile Phe Asp Glu Thr Phe Glu Phe Gln Val  
675 680 685

Asn Leu Pro Glu Leu Ala Met Ile Arg Phe Val Val Leu Asp Asp Asp  
690 695 700

Tyr Ile Gly Asp Glu Phe Ile Gly Gln Tyr Thr Ile Pro Phe Glu Cys  
705 710 715 720

Leu Gln Pro Gly Tyr Arg His Val Pro Leu Arg Ser Phe Val Gly Asp  
725 730 735

Ile Met Glu His Val Thr Leu Phe Val His Ile Ala Ile Thr Asn Arg  
740 745 750

Ser Gly Gly Lys Ala Gln Lys Arg Ser Leu Ser Val Arg Met Gly  
755 760 765

Lys Lys Val Arg Glu Tyr Thr Met Leu Arg Asn Ile Gly Leu Lys Thr  
770 775 780

Ile Asp Asp Ile Phe Lys Ile Ala Val His Pro Leu Arg Glu Ala Ile  
785 790 795 800

Asp Met Arg Glu Asn Met Gln Asn Ala Ile Val Ser Ile Lys Glu Leu  
805 810 815

Cys Gly Leu Pro Pro Ile Ala Ser Leu Lys Gln Cys Leu Leu Thr Leu  
820 825 830

Ser Ser Arg Leu Ile Thr Ser Asp Asn Thr Pro Ser Val Ser Leu Val  
835 840 845

Met Lys Asp Ser Phe Pro Tyr Leu Glu Pro Leu Gly Ala Ile Pro Asp  
850 855 860

Val Gln Lys Lys Met Leu Thr Ala Tyr Asp Leu Met Ile Gln Glu Ser  
865 870 875 880

Arg Phe Leu Ile Glu Met Ala Asp Thr Val Gln Glu Lys Ile Val Gln  
885 890 895

Cys Gln Lys Ala Gly Met Glu Phe His Glu Glu Leu His Asn Leu Gly  
900 905 910

Ala Lys Glu Gly Leu Lys Gly Arg Lys Leu Asn Lys Ala Thr Glu Ser  
915 920 925

Phe Ala Trp Asn Ile Thr Val Leu Lys Gly Gln Gly Asp Leu Leu Lys  
930 935 940

Asn Ala Lys Asn Glu Ala Ile Glu Asn Met Lys Gln Ile Gln Leu Ala  
945 950 955 960

Cys Leu Ser Cys Gly Leu Ser Lys Ala Pro Ser Ser Ser Ala Glu Ala  
965 970 975

Lys Ser Lys Arg Ser Leu Glu Ala Ile Glu Glu Lys Glu Ser Ser Glu  
980 985 990

Glu Asn Gly Lys Leu  
995